



# **Revised Draft**

# Finding of Suitability to Transfer for Parcel B-1

# Hunters Point Naval Shipyard San Francisco, California

**April 2017** 

#### Prepared for:

Department of the Navy Base Realignment and Closure Program Management Office West San Diego, California

#### Prepared by:

TriEco-Tt, A Joint Venture of TriEco LLC and Tetra Tech EM Inc. 1230 Columbia Street, Suite 1000 San Diego, California 92101

#### Prepared under:

Naval Facilities Engineering Command Contract Number N62473-11-D-2205 Delivery Order 0057

# **TABLE OF CONTENTS**

ACR	ONYM	IS AND ABBREVIATIONS	iii			
1.0	PUR	POSE	1			
2.0	PROPERTY DESCRIPTION					
3.0	SUMMARY OF ENVIRONMENTAL CONDITIONS					
	3.1 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND L					
		3.1.1 Pre-ROD Removal Actions				
		3.1.2 Remedial and Removal Actions after the 1997 ROD				
		3.1.3 Remedial and Removal Actions after the 2009 Amended ROD				
		3.1.4 Radiological Concerns				
	3.2	PETROLEUM PRODUCTS AND DERIVATIVES				
	3.3	ABOVEGROUND AND UNDERGROUND STORAGE TANKS AND PIPELINES				
		3.3.1 ASTs				
		3.3.2 USTs				
		3.3.3 Fuel Lines				
	3.4	MUNITIONS AND EXPLOSIVES OF CONCERN.				
	3.5 ASBESTOS-CONTAINING MATERIAL		9			
	3.6 Lead-Based Paint		10			
	3.7	3.7 POLYCHLORINATED BIPHENYLS				
	3.8	PESTICIDES	12			
4.0	ADJ	ACENT PARCELS	12			
5.0	NOT	NOTIFICATIONS				
	5.1	HAZARDOUS SUBSTANCES	15			
	5.2	5.2 ASBESTOS-CONTAINING MATERIAL				
	5.3	LEAD-BASED PAINT	16			
	5.4	PESTICIDES	16			
6.0	RESTRICTIONS					
7.0	COV	COVENANTS				
8.0	FINI	FINDING OF SUITABILITY TO TRANSFER				
9.0	REF	ERENCES	21			

#### **FIGURES**

- 1 Hunters Point Naval Shipyard Regional Location
- 2 Property Location
- 3 Site Features
- 4 Restrictions
- 5 Petroleum Program

#### **TABLE**

1 Environmental Requirements

### **APPENDICES**

- A Summary of Hazardous Substances Stored, Disposed of, or Released
- B Regulatory Comments and Comment Adjudication

#### **ACRONYMS AND ABBREVIATIONS**

§ Section§§ Sections

ACM Asbestos-containing material

AOC Area of concern

ARIC Area requiring institutional controls

AST Aboveground storage tank

BCT BRAC Cleanup Team

BEC BRAC Environmental Coordinator
BRAC Base Realignment and Closure

BRRM Base Redevelopment and Realignment Manual

CAA Corrective action area

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFR Code of Federal Regulations

COC Chemical of concern

CRUP Covenant to restrict use of property

DERP Defense Environmental Restoration Program

DoD U.S. Department of Defense

DTSC California Environmental Protection Agency Department of Toxic Substances

Control

EBS Environmental baseline survey

EPA U.S. Environmental Protection Agency

ERRG Engineering/Remediation Resources Group, Inc.

FAD Friable, accessible, and damaged FFA Federal Facility Agreement

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act

FOST Finding of Suitability to Transfer

HLA Harding Lawson AssociatesHPNS Hunters Point Naval ShipyardHRA Historical radiological assessment

IC Institutional control

IPE Industrial process equipment IR Installation Restoration

ITSI Innovative Technical Solutions, Inc.

### **ACRONYMS AND ABBREVIATIONS (CONTINUED)**

LBP Lead-based paint

MACTEC Engineering and Consulting, Inc.

NAVSEA Naval Sea Systems Command Navy Department of the Navy

NEESA Naval Energy and Environmental Support Activity

NFA No further action

NPL National Priorities List

O&M Operation and maintenance

PAH Polycyclic aromatic hydrocarbon

PCB Polychlorinated biphenyl PMO Program Management Office

ppm Part per million

PWCSFB Public Works Center San Francisco Bay

RACR Remedial action completion report

ROD Record of decision

Sealaska Environmental Services, LLC

Shaw Environmental, Inc.

SI Site inspection

SVE Soil vapor extraction

TCRA Time-critical removal action
TPH Total petroleum hydrocarbons

U.S.C. United States Code

UST Underground storage tank

VOC Volatile organic compound

Water Board California Regional Water Quality Control Board, San Francisco Bay Region

YEI YEI Engineers, Inc.

ZVI Zero-valent iron

#### 1.0 PURPOSE

The purpose of this Finding of Suitability to Transfer (FOST) is to summarize how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been satisfied for Parcel B-1 at Hunters Point Naval Shipyard (HPNS) (Figure 1). Figure 2 shows the area covered by Parcel B-1 (termed the "Property").

This FOST has been prepared in accordance with the Department of Defense (DoD) Base Redevelopment and Realignment Manual (BRRM) (DoD 2006) and the Navy Base Realignment and Closure (BRAC) Program Management Office (PMO) Policy for Processing Findings of Suitability to Transfer or Lease (Navy BRAC PMO 2008).

Throughout this report, *italic* text is used to indicate forward-looking statements that identify actions that are not yet completed but are planned to be finished before this FOST is finalized. *Italic* text also designates published materials.

#### 2.0 PROPERTY DESCRIPTION

HPNS is located in southeastern San Francisco on a peninsula that extends east into San Francisco Bay, California (Figure 1). Portions of HPNS have been conveyed out of federal ownership. The remaining real property is currently divided into nine parcels, one of which is described as a "utility corridor," and two independent Installation Restoration (IR) sites: Parcels B-1, B-2, C, D-1, E, E-2, F, G, and UC-3 and IR Sites 7 and 18. Parcel B-1 is the subject of this FOST (Figure 2). Historically, Parcel B-1 was part of the industrial support area at HPNS and was used for shipping, ship repair, training, barracks, and offices.

The Property includes approximately 24.26 acres in the northern area of HPNS and is bounded by IR Sites 7 and 18 to the northwest, Parcel B-2 and San Francisco Bay (Parcel F) to the northeast, and Parcel C and former Parcel A to the south. A 2.6-acre portion of the central area of Parcel B-1 (termed the "IR-10 carve-out") was removed from Parcel B-1 in 2016; the IR-10 carve-out is not included in the Property. The Property includes all or portions of IR Sites 20, 23, 24, 42, 46 (fuel lines), 60, 61 and 62 and site inspection (SI) site SI-31. The boundary of IR Site 10 was adjusted via agreement with the Federal Facility Agreement (FFA) signatories and commemorated by a letter in 2017 to be entirely within the boundary of the IR-10 carve-out and not within the Property (Navy 2017). Portions of basewide IR Site 50 (storm drain and sanitary sewer lines), IR Site 51 (former transformer locations), and SI-45 (steam lines) are also within the Property. The land surface slopes gently from southwest to northeast toward the bay and is mostly paved or covered by structures, except for steep hillsides on the southwestern side, which are covered by vegetation. The northern corner of the Property abuts the bay and is bordered by an engineered riprap revetment or concrete seawalls (Figure 3).

#### 3.0 SUMMARY OF ENVIRONMENTAL CONDITIONS

HPNS was listed on the U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act

(CERCLA) in 1989. The Defense Environmental Restoration Program (DERP), codified as 10 *United States Code* (U.S.C.) Sections (§§) 2701–2709, gave the DoD Environmental Restoration Program a statutory basis. The Navy implements the DERP subject to, and in a manner consistent with, CERCLA and its regulations (the National Oil and Hazardous Substances Pollution Contingency Plan at Title 40 of the *Code of Federal Regulations* [CFR] Part 300). In September 1990, EPA Region 9, the California Environmental Protection Agency Department of Toxic Substances Control (DTSC), the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), and the Navy signed an FFA (Navy 1990). EPA, DTSC, and the Water Board were notified of the initiation of this FOST. Regulatory agency comments to this FOST are provided in Appendix B. The Navy, EPA, DTSC, and the Water Board representatives are collectively referred to as the BRAC Cleanup Team (BCT) for HPNS.

This section summarizes how the applicable environmental requirements for CERCLA (including radiological and other regulated hazardous materials), as well as environmental requirements for other regulated materials outside of CERCLA have been fully addressed at the Property (presented in Table 1).

Pursuant to CERCLA and Title 40 CFR Part 373, the deed for each parcel will contain, to the extent such information is available on the basis of a complete search of agency files, a notification of hazardous substances stored for 1 year or more or known to have been released or disposed of within the parcel. The information required to support this notification is provided in Appendix A. The notification will consist of the type and quantity of such hazardous substances; the time when storage, release, or disposal took place; and a description of the remedial or response action taken, if any.

# 3.1 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

Environmental inspections, assessments, and investigations were conducted beginning in 1983 to support closure, leasing, and transfer at HPNS. The Navy and the regulatory agencies signed a CERCLA Record of Decision (ROD) for Parcel B (including the Property) in 1997 (Navy 1997). The ROD addressed both soil and groundwater contaminated by CERCLA hazardous substances at Parcel B. The Navy and EPA jointly selected the remedy, which included excavation and offsite disposal of soil in selected areas and monitoring groundwater. The Navy conducted remedial actions in accordance with the ROD from 1998 to 2001. Updated information gained from the remedial actions as well as from additional groundwater monitoring, a screening-level ecological risk assessment, and a historical radiological assessment (HRA) indicated that an amended ROD would be required to be protective of human health and the environment in the long term. The amended Parcel B ROD was finalized in 2009 (Navy 2009). The amended remedy included further excavation of soil and off-site disposal. Durable covers across all of Parcel B were added to the remedy as physical barriers to cut off potential exposure to soil. A shoreline revetment was included as part of the durable cover remedy to protect potential ecological receptors in the bay. The amended remedy for groundwater was in-situ treatment to promote biodegradation of volatile organic compounds (VOC) as a source reduction measure. Groundwater monitoring was retained as part of the remedial action. In addition, the remedy included installation of a soil vapor extraction (SVE) system at IR Site 10 to remove and treat

VOCs in soil gas from soil and groundwater in that area as a source reduction measure. Finally, the amended remedy was also expanded to include cleanup of radiologically impacted soil and structures and institutional controls (IC) for soil, soil gas, and groundwater. The in-situ treatment of groundwater and installation of an SVE system apply only to the IR-10 carve-out area.

The chemicals of concern (COC) released in soil at the Property include metals; VOCs; semivolatile organic compounds, including pesticides, polychlorinated biphenyls (PCB), and polycyclic aromatic hydrocarbons (PAH); and total petroleum hydrocarbons (TPH). Radionuclides of concern at the Property include cesium-137, radium-226, and strontium-90. COCs in groundwater are primarily VOCs and selected metals. The main VOCs of concern include trichloroethene and tetrachloroethene and their degradation products, dichloroethene and vinyl chloride. Metals of concern in groundwater include copper, hexavalent chromium, lead, and mercury. The primary risks to human health and the environment from the COCs and radionuclides is through direct contact with soil or groundwater or inhalation of soil vapor from vapor intrusion into indoor air.

The following sections describe removal and remedial actions completed at the Property:

- Removal actions before the 1997 ROD was signed,
- Remedial and removal actions completed in accordance with and after the 1997 ROD,
- Remedial and removal actions completed in accordance with and after the 2009 amended ROD, and
- Radiological concerns that have been addressed on the Property.

All of the Property was included in an updated human health risk assessment (ChaduxTt 2007), which supported the remedial decisions in the amended ROD (Navy 2009). The remedies selected in the amended ROD address COCs at all IR and SI sites at the Property. The removal and remedial actions taken before and after the amended ROD address all IR and SI sites. Individual IR and SI sites associated with each removal or remedial action are described in the sections below.

#### 3.1.1 Pre-ROD Removal Actions

The Navy completed a group of removal actions at the Property before the original ROD was signed in 1997. The following list provides a summary of the pre-ROD removal actions. The Property was formerly part of Parcel B, which was subdivided in 2014 to form Parcels B-1 (the Property), B-2, and IR Sites 7 and 18. A 2.6-acre portion of the central area of Parcel B-1 (the IR-10 carve-out) was removed from Parcel B-1 in 2016. Therefore, some of the descriptions also include removals for areas adjacent to the Property in former Parcel B.

- 1974 to 1998: Removal of PCB-bearing electrical equipment basewide.
  - 1974 to 1988: Removal and disposal off site of 199 transformers, including 99 found to contain PCBs. Most transformers were removed in 1987 and 1988 (YEI Engineers, Inc. [YEI] 1988).
  - o **1996:** Removal and disposal off site of 239 pieces of PCB-containing equipment (Public Works Center San Francisco Bay [PWCSFB] 1996).
- **1991 to 1995:** Approximately 4,665 tons of sandblast grit was collected from areas across HPNS, including Parcel B, and consolidated at Parcel E (Battelle 1996).
- **1996 to 1997:** Removal actions were completed at exploratory excavations at IR Site 23 and sediment was removed from storm drains at Parcel B and disposed of off site (IT Corporation 1997, 1999).

#### 3.1.2 Remedial and Removal Actions after the 1997 ROD

The following list summarizes activities conducted after the 1997 ROD was signed.

- **July 1998 through September 1999:** First phase of original remedial action. Soil was removed from 32 areas and disposed of off site (ChaduxTt 2008). The removals included areas at IR Sites 10, 20, 23, 24, 42, 46, 60, 61, and 62. COCs included PAHs, PCBs, VOCs, and metals. Many of these excavated areas were expanded in a second phase in 2000 to 2001.
- May 2000 through December 2001: Second phase of original remedial action. Soil was removed from 17 areas and disposed of off site (ChaduxTt 2008). The removals included areas at IR Sites 10, 20, 23, 24, 46, and 60. COCs for the second phase were primarily metals.
- June 2000 through September 2002: SVE treatability study at IR Site 10 (IT Corporation 2002a; Tetra Tech EM Inc. 2003). This study showed the initial effectiveness of SVE to treat soil vapor at IR Site 10.
- 2003 through 2004: Base-wide actions to address aboveground issues at and near buildings, including removal of waste material, decontamination or removal of equipment and structures, and abatement of friable, accessible, and damaged (FAD) asbestos-containing materials (ACM). The primary objective of this action was to address potential environmental issues associated with the industrial use of buildings that could affect the planned transfer of the Property. Activities at the Property included surveys of industrial process equipment for PCB content and abatement of ACM (Tetra Tech Foster Wheeler Inc. 2004).

- May through June 2003: Characterization and sampling of the shoreline at IR Site 23 (Tetra Tech EM Inc. and Innovative Technical Solutions, Inc. [ITSI] 2004). Samples collected during this investigation provided the basis for the evaluation of potential risk to aquatic receptors which, in turn, contributed to the subsequent selection of a shoreline revetment as part of the amended remedy.
- September 2003 through March 2004: Groundwater treatability study at IR Site 10 using injection of zero-valent iron (ZVI) (Engineering/Remediation Resources Group, Inc. [ERRG] and URS Corporation 2004). This study showed the effectiveness of anaerobic degradation in treating VOCs in groundwater and resulted in large reductions in the concentrations of VOCs.

#### 3.1.3 Remedial and Removal Actions after the 2009 Amended ROD

- May 2006 through September 2010: Radiological removal actions for storm drains and sanitary sewers (IR Site 50) completed at Parcel B (Tetra Tech EC, Inc. 2012, 2014). Radiological actions also included surveys at Buildings 103, 113, 113A, and 146 and the site of former Building 114 (SI-31). Additional surveys were completed at these buildings to confirm that the remedial action objectives for radionuclides were met (Tetra Tech EC, Inc. 2016). Refer to Section 3.1.4 for more information on radiological activities.
- September 2010: Soil vapor survey completed for selected areas at Parcel B, including areas overlying a VOC plume in groundwater and other areas where VOCs were suspected based on previous soil or groundwater sample results. The report of the survey included a human health risk assessment to evaluate the risk of exposure to VOCs via vapor intrusion to indoor air (Sealaska Environmental Services LLC [Sealaska] 2013). The areas surveyed included parts of IR Sites 10, 20, 23, 24, 42, and 61.
- **February 2011:** Newly discovered underground storage tank (UST) 113A removed (ITSI 2011, 2012a) at IR Site 42. The tank capacity was estimated to be 200 to 230 gallons, and the tank was suspected to contain petroleum and solvents. The tank appeared intact when it was removed, and confirmation sampling of soil and water in the excavation did not indicate a release to soil or groundwater.
- **February through July 2011:** Soil from excavations at hot spots in the remainder of Parcel B was removed in accordance with the amended remedial action and disposed of off site from nine locations on Parcels B, D-1, and G (ERRG 2011). One removal area was located at the Property (near the southeastern corner of Building 123).
- November 2012 through July 2014: Construction of the amended remedy was completed at Parcel B-1, including parcel-wide durable covers, expansion and operation of an SVE system, and injection of polylactate into groundwater to treat VOCs. Durable covers at Parcel B-1 included a soil cover on hillside areas, asphalt pavement on lowland areas, a shoreline revetment, and restored building foundations (ERRG 2017).

The final remedial action completion report (RACR) for Parcel B-1 was submitted in January 2017 (ERRG 2017), and the FFA signatories have concurred with the final RACR (Forthcoming). The final RACR for the soil excavation and stockpile removals at Parcels B, D-1, and G was submitted in October 2011 (ERRG 2011), and EPA has concurred with this RACR (EPA 2014). Monitoring and maintenance of the remedy implemented at Parcel B-1 began after construction was completed; activities are ongoing in accordance with the final operation and maintenance (O&M) plan (ERRG 2016). ICs in the form of deed restrictions and a Covenant to Restrict the Use of Property (CRUP) will become effective when the Property is transferred by quitclaim deed to prevent or minimize exposure to areas where potential unacceptable risk is posed by COCs in soil and groundwater. A soil gas survey was completed at the Property in 2010 (Sealaska 2013). Figure 4 shows the areas requiring institutional controls (ARIC) for VOC vapors based on the results of the soil vapor survey. The ARICs for VOC vapors have been established through memoranda from the Navy BRAC Environmental Coordinator (BEC) to the administrative record file addressing the revised VOC ARIC boundaries as a non-significant change to the remedy selected in the amended ROD (see 55 Federal Register 8772, March 8, 1990) (Navy 2014, 2017). Figure 4 also shows Property-wide restrictions (for example, related to groundwater use). Refer to Section 6.0 for details on restrictions.

#### 3.1.4 Radiological Concerns

The Navy identified radiologically impacted sites throughout HPNS in the HRA (Naval Sea Systems Command [NAVSEA] 2004), including within the Property, associated with former use of general radioactive materials and decontamination of ships used during atomic weapons testing in the South Pacific. The HRA identified Buildings 103, 113, 113A, and 146 and former building site 114 as being radiologically impacted within the Property. Building 146 is included in IR Site 23; Buildings 113 and 113A are included in IR Site 42, and Building 103 is not part of an IR site. Former building site 114 is site SI-31. Impacted areas include those with a history of radiological operations and, therefore, have the potential for residual radioactive contamination (NAVSEA 2004). These buildings or former building sites were surveyed and determined to present no unacceptable radiological risks. Additional surveys were completed at Buildings 103, 113, 113A, and 146 in 2015 to confirm that the remedial action objectives for radionuclides were met (Tetra Tech EC, Inc. 2012, 2014, 2016). Based on the review of all relevant documentation and independent confirmatory analysis, all of the potentially radiologically impacted buildings and building sites previously identified in the HRA within the Property have been recommended by the California Department of Public Health's Environmental Management Branch for radiological unrestricted release (DTSC 2012, 2014, 2016).

The combined storm drain and sanitary sewer lines (IR Site 50) were investigated for the presence of radiological contaminants. The storm drain lines were used to transfer storm water runoff to the bay; the system was originally designed and built in the 1940s as a combined sanitary and storm sewer system, using the same conveyance piping and 40 separate discharge outfalls into the bay. In 2006, based on the radiological operational history at HPNS, the Navy concluded that a response action was required for the radiologically impacted media in and around the storm drain and sanitary sewer lines. The Navy further concluded that the only acceptable alternative to

address potential radioactive contamination was to excavate, survey, and appropriately dispose of the radiologically impacted materials (Navy 2006).

The Navy has completed a time-critical removal action (TCRA) for storm drains and sanitary sewers within the Property; refer to Figure 3 for the locations of storm drains and sanitary sewers. The TCRA involved excavating radiologically impacted storm drain and sanitary sewer lines and surrounding soil to achieve the removal action cleanup objectives. A total of 6,610 soil samples were collected to support the radiological removals across Parcel B. The TCRA also included decontaminating radiologically impacted structures, surveying buildings and former building sites, screening removed materials, and transporting contaminated materials off site to an appropriate disposal facility. The TCRA met the remedial action objectives in the amended ROD for the Property, as documented in the removal action completion report for the Property (Tetra Tech EC, Inc. 2012, 2014, 2016). Based on the removal action completion report, DTSC has concurred that the Property is suitable for unrestricted use with respect to radiological issues (DTSC 2012, 2014, 2016).

#### 3.2 Petroleum Products and Derivatives

The petroleum program strategy for site closure described in the Final New Preliminary Screening Criteria and Petroleum Program Strategy (Shaw Environmental, Inc. [Shaw] 2007) and revised by the Water Board (2008) provides the methodology and criteria used to identify petroleum-related sites that may require corrective action or further characterization at HPNS. The Navy and the Water Board identified 14 petroleum areas of concern (AOC) within the Property, including AOCs 7-E, 10-C, 23-A, 23-B, 24-B, 24-D, 24-E, 26-A, 46-C, 46-D, 46-E1, 46-E2, 60-A, and 60-B (Figure 5). Of these 14 AOCs, three contained petroleum commingled with CERCLA COCs, and are termed "commingled AOCs." The commingled AOCs include: 7-E, 10-C, and 46-C. All AOCs have been recommended for no further action (NFA) in accordance with the HPNS petroleum program strategy, as documented in the Final Petroleum Hydrocarbon Site Closeout Report for Parcel B (ITSI 2011, 2012b). The Water Board has concurred with the Navy's individual site closeout reports, which recommended NFA. The Water Board has issued NFA letters closing these sites (Water Board 2012a through 2012d, 2013a through 2013h, 2015a, 2015b).

Pipes coated with a material containing PAHs may be present below ground surface at various locations at the Property. PAHs are regulated substances and must be handled in accordance with all applicable federal, state, and local laws and regulations. The Navy, in consultation with EPA, DTSC, and the Water Board, has determined that the pipes and associated coating material in their existing subsurface condition do not present any threat to human health or the environment and will not present any threat to human health or the environment if and when removed and handled in accordance with applicable laws.

#### 3.3 ABOVEGROUND AND UNDERGROUND STORAGE TANKS AND PIPELINES

The following sections discuss aboveground storage tanks (AST), USTs, and buried fuel lines at the Property.

#### 3.3.1 ASTs

In 1998, the environmental baseline survey (EBS) report (Tetra Tech EM Inc. 1998) identified four ASTs associated with buildings within the Property. Two of the ASTs were located within AOC 23-A, northeast of Building 146 (Figure 5), and reportedly contained diesel and heating oil. The ASTs and surrounding soil were removed in 1995 (IT Corporation 1999). According to the EBS report and a finding of suitability to lease report in 2008 (MACTEC Engineering and Consulting, Inc. [MACTEC] 2008), two other inactive ASTs were located at the Property: a 250-gallon propane tank at Building 120, and a 100-gallon tank of unknown use at Building 115. The tanks and their contents have been removed and there is no record of releases of the contents; therefore, no further response action is required (ERRG 2015a). The exact former locations of the ASTs at Buildings 115 and 120 are unknown.

#### 3.3.2 USTs

A total of four USTs were present at the Property; all have been removed and disposed of off site. Figure 5 shows the locations of these former USTs and any associated AOCs. The following list summarizes information related to the USTs (ITSI 2011, 2012a).

- S-135. A 1,250-gallon fuel oil tank north of Building 116. Removed in 1993. Closed by the Water Board in 2002 (Water Board 2002a).
- S-136. A 750-gallon fuel oil tank northeast of former Building 118. Removed in 1993. Closed by the Water Board in 2002 (Water Board 2002b).
- S-145. A 500-gallon diesel tank adjacent to former Building 145 (AOC 23-B). Removed in 1999 during the removal of the associated fuel line. Closed by the Water Board with closure of AOC 23-B (Water Board 2013d).
- 113A. An estimated 200-gallon tank that contained petroleum and solvents that was discovered adjacent to Building 113A in September 2010 during a soil gas investigation. The UST was removed in 2011. Closed by the Water Board through the approval of the final petroleum site closeout report (ITSI 2012a).

#### 3.3.3 Fuel Lines

Most fuel lines were removed during the 1999 IR Site 46 fuel line system removal action (IT Corporation 2000). The location, orientation, survey data, excavation depths, site-specific notes, and "over-excavation" data for the fuel line system are provided in Appendix A of the removal action post-construction report (IT Corporation 2000). Segments of the pipeline were abandoned in place where the pipelines ran under a building and where they were inaccessible. Pipeline sections that were not removed were cut and the ends were plugged with cement grout. Piping that entered buildings was cut at the perimeter edge of the structure and either plugged with cement grout or an expandable rubber test plug (IT Corporation 2000).

Additional pipelines were discovered during the radiological removal actions in the vicinity of AOCs 24-E, 26-C, and 61-B. All of these pipelines and any residual fuels were removed and disposed of off site (ITSI 2011). Figure 5 shows the locations of fuel pipelines.

#### 3.4 MUNITIONS AND EXPLOSIVES OF CONCERN

Cargo ammunition and explosive items in ship's allowances were loaded and discharged only at designated naval ordnance facilities or explosive anchorages. Ships scheduled to undergo repair or overhaul were all relieved of their ammunition and explosives, except for permissible small arms ammunition, before they entered into the waters near the shipyard (Naval Energy and Environmental Support Activity [NEESA] 1984).

There is no record of munitions or explosives of concern on the Property.

#### 3.5 ASBESTOS-CONTAINING MATERIAL

Navy building inspectors conducted a survey of structures at HPNS between August and October 1993 to identify ACM. The survey results were reported in Asbestos Survey Report, Naval Station Treasure Island, Hunters Point Annex, Parcels B through E (Mare Island Naval Shipyard 1994) and summarized in the EBS report (Tetra Tech EM Inc. 1998). Buildings 103, 104, 109, 113, 113A, 115, 116, 117, 120, 121, 122, 123, 125, 144, 146, 150, 156, and 163 at the Property were found to contain either ACM, assumed ACM, or suspected ACM. The Navy PWCSFB conducted remediation for ACM in these buildings in 1995 to 1997 (except Buildings 122, 144, and 150, where no remediation was required). PWCSFB repaired, encapsulated, or removed and disposed of off site loose or damaged pipe insulation and ACM debris in 82 buildings at HPNS. The Navy conducted another survey of the buildings at the Property in 2001 to 2002 during waste consolidation activities and identified ACM or suspected ACM in all buildings (IT Corporation 2002b). The Navy conducted remediation of ACM at Buildings 103, 113, 117, and 123 in 2003 to 2004 (Tetra Tech Foster Wheeler Inc. 2004). The Navy conducted additional remediation of ACM at Buildings 103, 113, and 146 during 2008 in conjunction with radiological surveys at the Property (Tetra Tech EC, Inc. 2012). In summary, the Navy conducted various surveys for and remediation of ACM at the Property between 1995 and 2008. Even though remediation has been conducted, ACM or suspected ACM is assumed to remain in all buildings at the Property and any remaining steam lines at the Property.

It is DoD policy to manage ACM in a manner protective of human health and the environment, and to comply with all applicable federal, state, and local laws and regulations governing ACM hazards in or on buildings, structures, facilities, and utilities on the Property (DoD 1994). The Navy is not aware of any ACM that has been released into the environment and poses a threat to human health in the Property. Remediation of ACM by the Navy is not required in or on buildings, structures, facilities, and utilities that may be scheduled for demolition by the Transferee where (1) the transfer document prohibits occupation of the buildings until any ACM hazards are remedied or the building is demolished; and (2) the Transferee assumes responsibility for management of any ACM in accordance with applicable laws.

#### 3.6 LEAD-BASED PAINT

Before 1978, the use of lead-based paint (LBP) was common throughout the United States, including military installations. DoD's policy is to survey LBP hazards primarily associated with residential structures built before 1978 (DoD 1994). Navy policy does not require LBP surveys for commercial or industrial buildings unless the buildings will be reused for residential purposes.

No structures were surveyed for LBP at the Property during the EBS surveys because they were not residential structures; however, all buildings on the Property are assumed to contain LBP based on their known or assumed dates of construction. All of the buildings at the Property were constructed in the 1940s and 1950s. In 2006, a LBP survey was conducted for Buildings 104, 115, 116, 117, 120, and 125 in the area leased to artists. The presence of LBP was confirmed in all painted surfaces and most of the window glazing compounds in all of these buildings (MACTEC 2008). The buildings not included in the area leased to artists within the Property have not been surveyed for LBP; but based on the dates of their construction, these are assumed to contain LBP.

The Navy is not aware of any LBP that has been released into the environment and poses a threat to human health on the Property. In addition, land use restrictions that will be carried forward for the entire area of the Property will ensure that any potential LBP in soil that may exist in the vicinity of the structures will remain beneath the durable cover and will not pose a human health threat. Migration of LBP chips that may flake off existing buildings onto the durable cover is limited by best management practices, such as gravel bag check dams in drainage swales.

The federal Residential Lead-Based Paint Hazard Reduction Act of 1992 applies only to the transfer of federal property for residential use. The Navy has not implemented an LBP abatement program because the proposed transfer of the Property will not involve use of any existing structures for residential purposes. In the event any buildings will be reused as residential property, the Transferee will be required to renovate them consistent with the regulatory requirements for abatement of LBP hazards. If buildings, structures, or facilities that contain, or are presumed to contain, LBP are to be demolished, they must be demolished in accordance with applicable local, state, and federal requirements.

Demolition of non-residential buildings and structures constructed prior to 1978 creates the possibility of lead being found in the soil as a result of such activities. With respect to any such nonresidential buildings and structures which the Transferee intends to demolish and redevelop for residential use after transfer, the Transferee may, under applicable law or regulation, be required by DTSC or other regulatory agencies to evaluate the soil adjacent to such non-residential buildings and structures for soil-lead hazards, and to abate any such hazards that may be present after demolition of such non-residential buildings and structures, and prior to occupancy of any newly constructed residential buildings.

#### 3.7 POLYCHLORINATED BIPHENYLS

**Basewide.** In 1987 and 1988, 199 transformers located throughout HPNS were removed from their original locations and disposed of off site by American Environmental Management Corporation and the Navy's Public Works Department (Harding Lawson Associates [HLA] 1990). After this removal, YEI conducted a facility-wide utility study in 1988 that included a survey of all existing on-site electrical equipment containing PCBs (YEI 1988). YEI found 83 transformers containing PCBs at less than 50 parts per million (ppm) and 169 at greater than 50 ppm. The Navy conducted a basewide site inspection of all former transformer locations in 1994 (HLA 1994); former transformer sites were designated as IR Site 51.

Under the IR Program, 78 transformer locations found by YEI to contain PCBs at concentrations greater than 50 ppm were surveyed and evaluated for leakage and contamination. The 169 transformers were distributed across 78 locations throughout HPNS and all locations were evaluated. Removals were recommended whenever evidence of a spill or release was found (PRC Environmental Management Inc., Harding Lawson Associates, Levine-Fricke, and Uribe and Associates 1996). The IR Program also evaluated the sites of 118 transformers that were removed before 1988. These sites were visually evaluated for staining caused by leakage of oils containing PCBs. The Navy removed and disposed of 239 pieces of PCB-containing electrical equipment in 1996 (PWCSFB 1996).

**Property.** A total of 29 transformers, capacitors, or oil circuit breakers were located on the Property at the following buildings:

- Building 113: Two pieces of electrical equipment
- Building 122: Nineteen pieces of electrical equipment
- Building 123: Eight pieces of electrical equipment.

The EBS report listed 26 of these pieces of electrical equipment as disposed of and the remaining three as abandoned (one) or out of service (two) as listed in the table below.

Building	Substation	Unit	PCB Content (ppm)	Status
113	S	V-120	< 1	Out of service
122	V	V-2	3	Out of service
122	V	V-117	3	Abandoned

Note:

ppm Parts per million

The Navy conducted a survey at Parcel B to identify industrial process equipment (IPE) that may contain PCBs in 2001 (IT Corporation 2002b). In this survey, IPE included stand-alone industrial machinery, such as presses, punches, lathes, and process pumps, but did not include items such as elevator motors, cranes, powerhouse generators, or fluorescent light ballasts. No

IPE was observed in or about the 25 buildings included in the survey, including all of the buildings on the Property. Another survey in 2004 (Tetra Tech Foster Wheeler Inc. 2004) confirmed this conclusion, stating "There are no known pieces of Navy-owned or tenant-owned IPE containing PCBs at concentrations over regulatory thresholds remaining in Parcel B, Parcel C (including Dry Dock 4), or Parcel E."

#### 3.8 PESTICIDES

There is no record that an area or building on the Property was dedicated to storage of pesticides. The Property may contain pesticide residue from pesticides that have been applied in management of the Property (see Section 5.4).

#### 4.0 ADJACENT PARCELS

The Property is bordered by other HPNS parcels as follows: IR Sites 7 and 18 to the northwest, Parcel B-2 and San Francisco Bay (Parcel F) to the northeast and east, and Parcel C and former Parcel A to the south and southeast (Figure 2). The IR-10 carve-out is surrounded by the Property.

There is little potential for radioactive materials in adjacent parcels to pose a risk at the Property. The only potential exposure pathway for radiological exposure would be via inhalation of windblown dust from uncovered areas. The Navy maintains active dust control measures for all radiologically impacted areas at HPNS, including those adjacent to the Property (Tetra Tech EC, Inc. 2009). The basewide radiological contractor periodically measures the dose rate at the perimeter of all radiologically impacted areas, and these measurements indicate no migration of radiological materials. Likewise, basewide monitoring for dust does not indicate radioactive contamination in the dust.

The following subsections describe adjacent parcels and the potential for contaminants from those sites to affect the Property. Each subsection describes groundwater first, followed by soil gas. The subsections also describe any ongoing remedial actions occurring at adjacent parcels.

#### Northwest – IR Sites 7 and 18

Groundwater flows from the Property toward IR Sites 7 and 18; therefore, it is unlikely that chemicals in groundwater at these adjacent areas would adversely affect the Property based on the upgradient location of the Property.

Soil gas has the potential to migrate from adjacent IR Sites 7 and 18 into subsurface soil at the Property. However, nearly all of the COCs at IR Sites 7 and 18 were non-volatile chemicals (primarily metals). Methane was a concern for a portion of IR Site 7, but this area was more than 100 feet northwest of the Property and the methane source (native organic material at the top of the Bay Mud at about 23 to 25 feet below ground surface) was excavated and disposed

of off site in 2008 (SES-TECH Remediation Services, Inc. 2009). Follow-up soil gas monitoring in the excavated area did not detect methane during 4 years of semiannual monitoring (ERRG 2012a). Furthermore, soil along more than half of the boundary between IR Sites 7 and 18 and the Property was previously excavated and replaced with clean fill; this area is approximately the same as commingled AOC 7-E shown on Figure 5. Therefore, it is unlikely that soil gas migration from IR Sites 7 and 18 would adversely affect the Property.

IR Sites 7 and 18 have been found suitable for transfer, as summarized in the Final FOST for IR Sites 7 and 18 (ChaduxTt 2013).

**Completed remedial actions.** Construction of durable covers and shoreline revetment at IR Sites 7 and 18 was completed in 2011, as documented in the final RACR (ERRG 2012a). These remedial actions completed the environmental response at IR Sites 7 and 18. IR Sites 7 and 18 are currently inspected via a long-term O&M plan (ERRG 2012b).

#### <u>Central – IR-10 Carve-out</u>

Groundwater flow in the general area of the Property is toward the bay, from southwest to northeast. Consequently, groundwater from the IR-10 carve-out area flows toward the northeastern portion of the Property. Groundwater in the IR-10 carve-out area contains a plume of VOCs, especially trichloroethene and its degradation product, vinyl chloride. Groundwater at IR Site 10 was treated by injecting approximately 8,000 pounds of polylactate into the shallow aquifer at 45 injection points during a single injection event to promote source reduction of VOCs in groundwater. Long-term reduction in VOC concentrations in groundwater will be achieved via the monitored natural attenuation remedy. Details of the groundwater treatment will be included in the RACR for the IR-10 carve-out. Groundwater monitoring of the treatment area continues as part of the basewide groundwater monitoring program. The size and location of the IR-10 carve-out area were selected to enclose the VOC plume and, therefore, it is unlikely that groundwater migration from the IR-10 carve-out area would adversely affect the Property. Monitoring of the plume since 2013 has determined that the plume is stable, well defined, and that the plume is not migrating downgradient (CE2-Kleinfelder 2013, 2014a, 2014b, 2015a, 2015b, 2016a, 2016b).

Soil gas has the potential to migrate from the IR-10 carve-out area into subsurface soil at the Property. The existing SVE system at IR Site 10 within Building 123 was expanded and operated to reduce residual VOCs in soil and soil gas beneath the building foundation. The SVE system was operated until its operation was deemed inefficient. Details of the SVE treatment will be included in the RACR for the IR-10 carve-out. The carve-out boundary was selected to enclose a minimum 100-foot buffer from the estimated location of the outer edge of the soil gas plume. The plume boundary is stable, and it is unlikely that soil gas migration from the IR-10 carve-out area would adversely affect the Property.

#### Northeast and East – Parcel B-2 and San Francisco Bay (Parcel F)

Groundwater flows from the Property toward Parcel B-2 and the bay; therefore, it is unlikely that chemicals in groundwater at these adjacent areas would adversely affect the Property based on the upgradient location of the Property.

Soil gas has the potential to migrate from adjacent Parcel B-2 into subsurface soil at the Property. The soil gas survey conducted in 2010 at Parcel B (Sealaska 2013) included samples at Parcel B-2 and provides an indication of potential soil gas migration. ARICs for VOC vapors are already proposed at the Property (Figure 4) where adjacent soil gas samples indicated concentrations that could pose unacceptable risk.

**Ongoing and completed remedial actions.** Remediation at Parcel B-2 is in progress, including the following components:

**Soil:** Excavation and off-site disposal in selected areas has been completed. Soil that exceeded the remediation goal for lead was excavated and disposed of off site from one area in 2010 (ERRG 2011). Remediation for TPH-contaminated soil has been completed within the southeastern ends of corrective action area [CAA] 21 and AOC 46-B (ERRG 2015b). Installation of parcel-wide durable covers, including the shoreline revetment, has been completed.

**Groundwater:** Monitoring of groundwater is in progress in accordance with the current work plan for the basewide groundwater monitoring program (Trevet 2016). The Navy is conducting further investigations of mercury in groundwater in the area of IR Site 26.

**Radiologically impacted soil and structures:** Excavation of impacted storm drain and sanitary sewer lines and off-site disposal has been completed (Tetra Tech EC, Inc. 2012, 2014). Radiologically impacted buildings or former building sites have been surveyed and determined to present no unacceptable radiological risks (Tetra Tech EC, Inc. 2012, 2014). Additional surveys were completed at Buildings 130 and 140 at Parcel B-2 to confirm that the remedial action objectives for radionuclides were met (Tetra Tech EC, Inc. 2016).

#### **South and Southeast – Parcel C and former Parcel A**

Former Parcel A has been found suitable for transfer (Tetra Tech EM Inc. 2004) and has been transferred to the agency formerly known as the San Francisco Redevelopment Agency and deleted from the NPL. No COCs remain in groundwater or soil vapor at concentrations that exceed screening levels that may migrate to the Property. Therefore, there is no potential for this parcel to adversely affect the Property.

Groundwater flows from IR Site 25 at adjacent Parcel C onto the Property. Groundwater in this area (termed RU-C5) has been adequately characterized and is being actively remediated.

COCs in groundwater at RU-C5 have not migrated to the Property. Remediation is expected to address any potential migration of VOCs in groundwater from Parcel C.

Soil gas has the potential to migrate from adjacent Parcel C into subsurface soil at the Property. The soil gas survey conducted in 2010 at Parcel B (Sealaska 2013) included samples along the boundary between the Property and Parcel C and indicated there is a potential for soil gas to migrate from Parcel C to the Property. A parcel-wide soil gas survey has not yet been conducted at Parcel C, but is scheduled after remedial actions have been completed. Areas of known VOC contamination in soil and groundwater at Parcel C have been adequately characterized and are undergoing active remediation. Remediation is expected to address any potential migration of VOCs in soil gas from Parcel C.

**Ongoing and completed remedial actions.** Remediation at Parcel C is in progress, including the following components:

**Soil:** Excavation and off-site disposal in selected areas (completed), SVE for source reduction for VOCs (in progress), and installation of parcel-wide durable covers (completed).

**Groundwater:** Treatment using ZVI or biological substrate to break down VOCs (in progress). Previous treatability studies at RU-C5 have also reduced the concentrations of VOCs in groundwater using a variety of methods, including thermal conduction heating, soil vapor extraction, and aerobic and anaerobic biodegradation (IT Corporation 2001; Shaw 2005; CDM Smith 2012).

**Soil gas:** SVE for source reduction of VOCs (in progress). The operational goal is for VOC concentrations to be consistently less than treatment criteria with decreasing trends by the end of 2018. Soil gas confirmation sampling will be conducted in remediation areas to confirm the remediation has addressed the potential for soil gas migration. Soil gas survey to provide data to evaluate potential vapor intrusion risks and assess the need for additional remediation or ICs (not yet started).

**Radiologically impacted soil and structures:** Decontamination of impacted structures (in progress) and excavation of impacted storm drain and sanitary sewer lines and off-site disposal (completed).

#### 5.0 NOTIFICATIONS

This section summarizes the notifications applicable to the Property that were identified for incorporation into the transfer deed.

#### 5.1 HAZARDOUS SUBSTANCES

Hazardous substances stored, released, or disposed of on site require a CERCLA hazardous substance notice, in accordance with Title 40 CFR Part 373 and CERCLA § 120(h)(3)(A). Therefore, Appendix A lists, to the extent that such information is available on the basis of a

complete search of agency files, the type and quantity of such hazardous substances, the time at which storage, release, or disposal took place, and the remedial action taken, if any.

#### 5.2 ASBESTOS-CONTAINING MATERIAL

The deed will contain a notice that the Transferee is hereby informed and does acknowledge that asbestos and ACM have been found and are otherwise presumed to exist in all buildings and any remaining steam lines at the Property. The Transferee will be responsible for managing and complying with all applicable federal, state, and local laws and regulations relating to ACM.

#### 5.3 LEAD-BASED PAINT

The Transferee is hereby notified that LBP is presumed present in nonresidential buildings, structures, or facilities within the parcel proposed for transfer based on the age of construction (that is, the building or structure was constructed before the Consumer Product Safety Commission's 1978 ban on LBP for residential use). The Property contains numerous buildings known or presumed to have been built before 1978 that may contain LBP. Lead (from LBP) may exist in soil surrounding these buildings. LBP may have been stripped from the buildings through normal weathering. The deed will contain a notice stating that all buildings within the Property are presumed to contain LBP because of their age. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. With respect to any buildings, structures, or facilities which the Transferee intends to demolish and redevelop, the Transferee may, under applicable law or regulation, be required by DTSC or other regulatory agencies to evaluate the soil adjacent to these buildings, structures, or facilities for soil-lead hazards resulting from LBP, and to abate any such hazards that may be present, after demolition and prior to construction of any structures. In addition, with respect to any such demolition by Transferee, Transferee may, under applicable law or regulation, be required by DTSC or other regulatory agencies to evaluate the soil adjacent to such buildings, structures, or facilities for soil-lead hazards resulting from LBP, and to abate any such hazards that result from Transferee's demolition activities.

#### 5.4 PESTICIDES

NOTIFICATION OF PESTICIDE USE: The Property may contain pesticide residue from pesticides that have been applied in the management of the Property. The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA — 7 U.S.C. § 136, et seq.), its implementing regulations, and according to the labeling provided with such substances. It is Navy's position that it shall have no obligation under the covenants provided pursuant to § 120(h)(3)(A)(ii) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9620(h)(3)(A)(ii), for the remediation of any registered pesticides applied in a manner consistent with its labeling and in accordance with FIFRA.

#### 6.0 RESTRICTIONS

**CERCLA Institutional Controls.** In accordance with the amended ROD prepared pursuant to CERCLA for the Property (Navy 2009), ICs will be implemented to prevent exposure to COCs in soil and groundwater on the Property. These restrictions will be incorporated into two separate legal instruments: (1) quitclaim deed(s) between the Navy and the Transferee; and (2) CRUP(s) between the Navy and DTSC, with EPA as a third-party beneficiary. The ICs will apply to any and all property within the ARICs (Figure 4).

All of the Property will be subject to ICs related to soil and groundwater. In addition, ICs have been selected in the amended ROD (Navy 2009) to address potential vapor intrusion from VOCs in soil vapor and groundwater. Risk to human health may exist from potential intrusion of VOC vapors into structures built at the Property in certain areas, as designated on Figure 4. Consequently, these areas are included in the ARICs for VOC vapors at the Property. If enclosed structures are to be constructed on the Property in the ARICs subject to potential vapor intrusion, engineering controls or other design alternatives to assure vapors are reduced to acceptable levels must be implemented. In addition, the requirement for engineering controls or other design alternatives will be enforced through a recorded deed restriction and a restrictive covenant between DTSC and the Navy.

The IC land use restrictions for the Property are as follows:

- 1. The following activities are prohibited throughout the Property:
  - a. Growing vegetables, fruits, or any edible items in native soil for human consumption. Plants for human consumption may be grown if they are planted in raised beds (above the CERCLA-approved cover) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) may also be planted provided they are grown in containers with a bottom that prevents the roots from penetrating the native soil.
  - b. Use of groundwater (except as provided in item 2c below).
- 2. The following activities are restricted throughout the Property unless prior written approval for an activity is granted by the FFA signatories:
  - a. "Land disturbing activity," which includes, but is not limited to:

    excavation of soil, (2) construction of roads, utilities, facilities, structures, and appurtenances of any kind, (3) demolition or removal of "hardscape" (for example, concrete roadways, parking lots, foundations, and sidewalks),
    any activity that involves movement of soil to the surface from below the surface of the land, and (5) any other activity that causes or facilitates movement of known contaminated groundwater. Land-disturbing activities are not intended to include placement of additional clean, imported fill on top of the soil cover that the Navy has constructed at the Property.

- b. Alteration, disturbance, or removal of (i) any component of a response or cleanup action (including, but not limited to durable cover, revetment walls and shoreline protection); or (ii) groundwater extraction, injection, and monitoring wells and associated piping and equipment; or (iii) associated utilities.
- c. Extraction of groundwater and installation of new groundwater wells, with the exception of construction, operation, and maintenance responses or remedial actions as required or necessary under the CERCLA remedy.
- d. Removal of or damage to security features of a CERCLA remedy or monitoring device (for example, locks on monitoring wells, survey monuments, fencing, signs, or monitoring equipment and associated pipelines and appurtenances).
- e. Construction of enclosed structures. Prior to construction of any new enclosed structure within a VOC ARIC, the Owner shall obtain approval from the FFA signatories of the vapor mitigation engineering controls or design alternatives to be incorporated in that structure and any related post-construction operation and maintenance requirements. A reduction in potential risk can be achieved through engineering controls or other design alternatives that meet the specifications set forth in DTSC's "Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" and "Final Vapor Intrusion Mitigation Advisory, Revision 1," both dated October 2011 (DTSC 2011a, 2011b), and any future revisions. Prior to occupation of enclosed structures with a VOC ARIC, the Owner shall obtain FFA signatory approval that any necessary vapor mitigation engineering controls or design alternatives have been properly constructed and are operating successfully.

The IC objectives will be met by access controls until the time of transfer.

#### 7.0 COVENANTS

The deed will contain the following covenants.

All Remedial Action Has Been Taken. The deed will include a covenant by the United States, made pursuant to the provisions of CERCLA § 120(h)(3)(A)(ii)(I) and as set forth in DoD Instruction 4165.72. The covenant will warrant that all remedial action necessary to protect human health and the environment with respect to any hazardous substance remaining on the Property has been taken before the date of this deed.

**Additional Remediation Obligation.** The deed will also include a covenant by the United States, made pursuant to the provisions of CERCLA § 120(h)(3)(A)(ii)(II) and as set forth in DoD Instruction 4165.72, warranting that any remedial action found to be necessary after the date of this deed shall be conducted by the United States.

**Right of Access.** The deed will contain a reservation by the Government of a right of access to the Property, in any case in which any remedial or corrective action is found to be necessary after the date of such transfer, pursuant to the provisions of CERCLA § 120(h)(3)(A)(iii) and as set forth in DoD Instruction 4165.72.

**Asbestos-Containing Material.** The Transferee covenants and agrees that in its use of the Property, including but not limited to demolition or handling of buildings, structures, facilities, or utilities containing ACM, it will be responsible for managing ACM and for complying with all applicable federal, state, and local laws relating to ACM.

If ACM within a building, structure, or facility on the Property may pose a threat to human health within the building, structure, or facility (that is, FAD ACM) at the time of transfer, the Transferee shall prohibit occupation of the building, structure, or facility until the ACM is abated or the building, structure, or facility is demolished by the Transferee in accordance with all applicable local, state, and federal laws and other requirements relating to asbestos or ACM.

**Lead-Based Paint.** The deed will contain a covenant that the Transferee, in its use and occupancy of the Property, including but not limited to demolition of buildings, structures, or facilities, and identification and/or evaluation of any LBP hazards, shall be responsible for managing LBP and LBP hazards, including soil-lead hazards resulting from LBP, in accordance with applicable federal, state, and local laws and other requirements relating to LBP and LBP hazards. Furthermore, the Transferee will prohibit residential occupancy and use of buildings and structures, or portions thereof, prior to identification and evaluation of any LBP hazards, and abatement of any hazards identified as required by applicable law.

# 8.0 FINDING OF SUITABILITY TO TRANSFER

	ne information contained in this FOST and the no tained in the deed, the Property is suitable for trans		its tha
Signature:	Mr. Lawrence Lansdale, PE By direction of the Director BRAC Program Management Office	Date:	

#### 9.0 REFERENCES

- Battelle. 1996. Field Demonstration Report on Recycling Spent Sandblasting Grit into Asphaltic Concrete, Volume I, Field Demonstration Test Methods, Results and Conclusions. January 11.
- California Environmental Protection Agency Department of Toxic Substances Control (DTSC). 2011a. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. October.
- DTSC. 2011b. Final Vapor Intrusion Mitigation Advisory, Revision 1. October.
- DTSC. 2012. Radiological Unrestricted Release Recommendation for Parcel B Except IR Site 7 and 18, Hunters Point Shipyard, San Francisco, California. From Kelvin Yamada, Branch Chief, Environmental Management Branch. To Stephen A. Woods, Department of Defense Project Manager, Center for Environmental Health. July 31.
- DTSC. 2014. Suspension of Radiological Unrestricted Release Recommendation for 22 Buildings, Hunters Point Shipyard, San Francisco, California. From George Chow, Project Manager, Brownfields and Environmental Restoration Program. To Thomas Macchiarella, Department of the Navy. November 25.
- DTSC. 2016. Reinstatement of Radiological Unrestricted Release Recommendations for Buildings 103, 113, 113A, 146, 130, 140, 351, 351A, 366, 401, 411, and 439 in Parcels B and G, former Hunters Point Naval Shipyard. From Nina Bacey, Project Manager, Brownfields and Environmental Restoration Program. To Derek Robinson, BRAC Environmental Coordinator. April 27.
- California Regional Water Quality Control Board, San Francisco Bay Region (Water Board). 2002a. Case Closure Letter for Underground Storage Tank S-135, Hunters Point Naval Shipyard, San Francisco, San Francisco County (Regional Water Board Case No. 38D9500). From Ms. Loretta K. Barsamian, Water Board. To Mr. Keith Forman, BRAC Environmental Coordinator. December 13.
- Water Board. 2002b. Case Closure Letter for Underground Storage Tank S-136, Hunters Point Naval Shipyard, San Francisco, San Francisco County (Regional Water Board Case No. 38D9501). From Ms. Loretta K. Barsamian, Water Board. To Mr. Keith Forman, BRAC Environmental Coordinator. December 13.
- Water Board. 2008. Letter Regarding Concurrence with the Final New Preliminary Screening Criteria and Petroleum Program Strategy, Hunters Point Shipyard, San Francisco. From Erich Simon, Water Board Project Manager. To Keith Forman, Base Realignment and Closure Environmental Coordinator, Naval Facilities Engineering Command, Southwest Division. February 28.
- Water Board. 2012a. No Further Action for Areas of Concern (AOCs) 07-A, 07-B, 07-C, 07-D, 07-E, and 18-B, Parcel B, Hunters Point Naval Shipyard, San Francisco County. January 30.

- Water Board. 2012b. No Further Action for Area of Concern (AOC) 10-C, Parcel B, Hunters Point Naval Shipyard, San Francisco County. February 22.
- Water Board. 2012c. No Further Action for Area of Concern (AOC) 23-A, Parcel B, Hunters Point Naval Shipyard, San Francisco, San Francisco County. June 26.
- Water Board. 2012d. No Further Action for Area of Concern (AOC) 46-D, Parcel B, Hunters Point Naval Shipyard, San Francisco County. July 23.
- Water Board. 2013a. No Further Action for Area of Concern (AOC) 26-A, Parcel B, Hunters Point Naval Shipyard, San Francisco County. January 8.
- Water Board. 2013b. No Further Action for Area of Concern (AOC) 24-B, Parcel B, Hunters Point Naval Shipyard, San Francisco County. January 9.
- Water Board. 2013c. No Further Action for Area of Concern (AOC) 24-D, Parcel B, Hunters Point Naval Shipyard, San Francisco County. January 24.
- Water Board. 2013d. No Further Action for Area of Concern (AOC) 23-B including one un-named UST, Parcel B, Hunters Point Naval Shipyard, San Francisco County. February 25.
- Water Board. 2013e. No Further Action for Area of Concern (AOC) 60-A, Parcel B, Hunters Point Naval Shipyard, San Francisco County. February 25.
- Water Board. 2013f. No Further Action for Area of Concern (AOC) 60-B, Parcel B, Hunters Point Naval Shipyard, San Francisco County. February 27.
- Water Board. 2013g. No Further Action for Area of Concern (AOC) 46-E1, Parcel B, Hunters Point Naval Shipyard, San Francisco County. March 4.
- Water Board. 2013h. No Further Action for Area of Concern (AOC) 46-E2, Parcel B, Hunters Point Naval Shipyard, San Francisco County. March 6.
- Water Board. 2015a. No Further Action for Area of Concern (AOC) 24-E, Parcels B-1 and B-2, Hunters Point Naval Shipyard, San Francisco County. March 25.
- Water Board. 2015b. No Further Action for Area of Concern (AOC) 46-C, Parcels B-1 and B-2, Hunters Point Naval Shipyard, San Francisco County. March 26.
- CDM Smith. 2012. Final Treatability Study Completion Report, Remedial Unit-C5, Building 134, Hunters Point Naval Shipyard, San Francisco, California. January 27.
- CE2-Kleinfelder. 2013. Semiannual Groundwater Monitoring Report (January June 2013), Hunters Point Naval Shipyard, San Francisco, California. September.
- CE2-Kleinfelder. 2014a. Semiannual Groundwater Monitoring Report (July December 2013), Hunters Point Naval Shipyard, San Francisco, California. April.

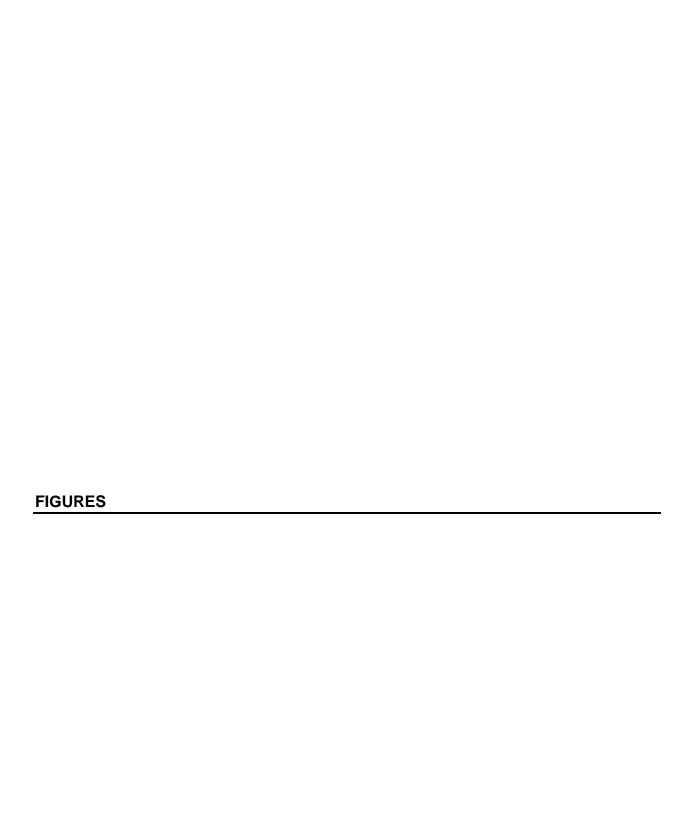
- CE2-Kleinfelder. 2014b. Semiannual Groundwater Monitoring Report (January June 2014), Hunters Point Naval Shipyard, San Francisco, California. December.
- CE2-Kleinfelder. 2015a. Semiannual Groundwater Monitoring Report (July December 2014), Hunters Point Naval Shipyard, San Francisco, California. April.
- CE2-Kleinfelder. 2015b. Semiannual Groundwater Monitoring Report (January June 2015), Hunters Point Naval Shipyard, San Francisco, California. October.
- CE2-Kleinfelder. 2016a. Semiannual Groundwater Monitoring Report (July December 2015), Hunters Point Naval Shipyard, San Francisco, California. May.
- CE2-Kleinfelder. 2016b. Semiannual Groundwater Monitoring Report (January June 2016), Hunters Point Naval Shipyard, San Francisco, California. December.
- Chadux Tt. 2007. Final Parcel B Technical Memorandum in Support of a Record of Decision Amendment, Hunters Point Shipyard, San Francisco, California. December 12.
- Chadux Tt. 2008. Final Construction Summary Report for Parcel B, Hunters Point Shipyard, San Francisco, California. July 25.
- Chadux Tt. 2010. Final Remedial Design Package for Parcel B (Excluding Installation Restoration Sites 7 and 18), Hunters Point Shipyard, San Francisco, California. December 10.
- ChaduxTt. 2012. Final Amendment to Revised Final Design Basis Report for Parcel B (Excluding Installation Restoration Sites 7 and 18), Hunters Point Naval Shipyard, San Francisco, California. September 28.
- Chadux Tt. 2013. Final Finding of Suitability to Transfer for Parcel B IR Sites 7 and 18, Hunters Point Naval Shipyard, San Francisco, California. February 4.
- Department of Defense (DoD). 1994. Asbestos, Lead-Based Paint (LBP), and Radon Policies at Base Realignment and Closure Cleanup (BRAC) Properties.
- DoD. 2006. Base Redevelopment and Realignment Manual. DoD 4165.66-M. Office of the Deputy Under Secretary of Defense (Installations and Environment). March 1. Available on-line at: http://www.dod.mil/brac/pdf/4165-66-M\_BRRM.PDF
- Department of the Navy (Navy). 1990. Federal Facility Agreement for Naval Station Treasure Island Hunters Point Annex. September.
- Navy. 1997. Hunters Point Shipyard, Parcel B, Final Record of Decision. October 7.
- Navy. 2006. Final Basewide Radiological Removal Action, Action Memorandum Revision 2006, Hunters Point Shipyard, San Francisco, California. April 21.
- Navy. 2009. Final Amended Parcel B Record of Decision, Hunters Point Shipyard, San Francisco, California. January 26.

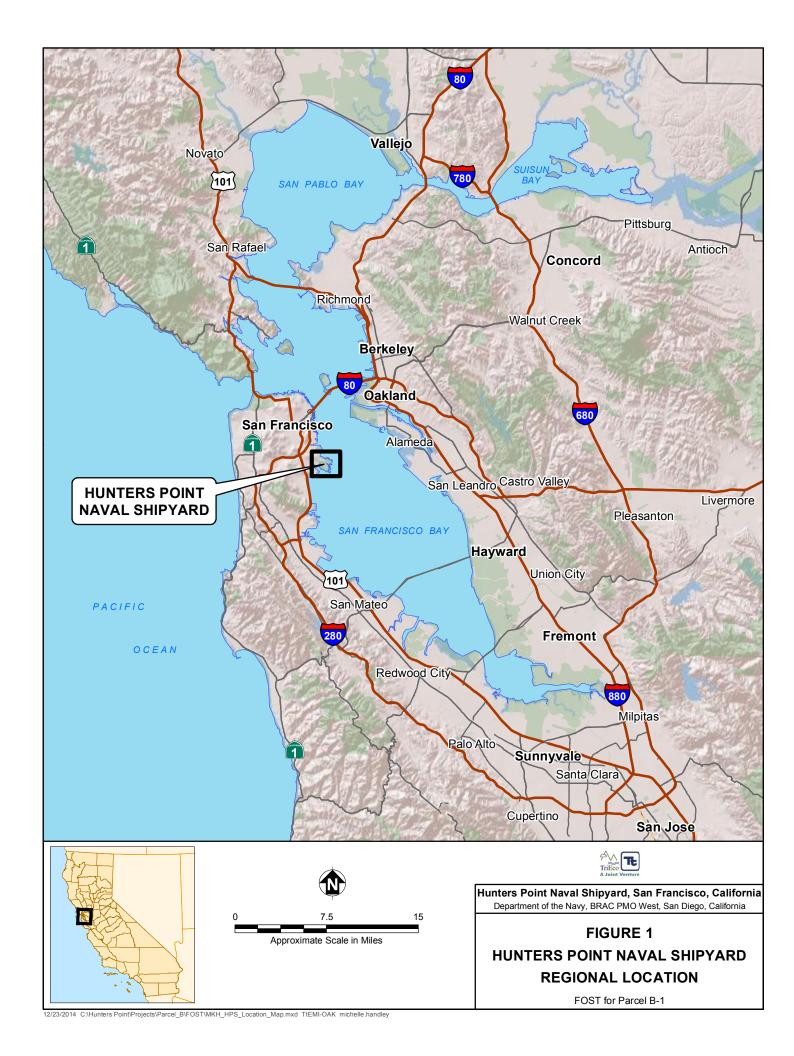
- Navy. 2014. Non-significant (Minor) Changes to the Selected Remedies Presented in the Records of Decision for Parcels B, D-1, G, UC-1, and UC-2, Hunters Point Naval Shipyard, San Francisco, California. September 15.
- Navy. 2017. Non-significant (Minor) Changes to the Selected Remedies Presented in the Amended Record of Decision for Parcel B, Hunters Point Naval Shipyard, San Francisco, California. *Forthcoming*.
- Navy. 2017. Memorandum to the Administrative Record Regarding Changes to the Boundary of Installation Restoration Site 10, Hunters Point Naval Shipyard, San Francisco, California. *Forthcoming*.
- Navy Base Realignment and Closure (BRAC) Program Management Office (PMO). 2008. Policy for Processing Findings of Suitability to Transfer or Lease. December 12.
- Engineering/Remediation Resources Group Inc. (ERRG). 2011. Final Remedial Action Completion Report for Soil Hotspot Locations at Parcels B, D-1, and G and Soil Stockpiles at Parcels D-1 and G, Hunters Point Naval Shipyard, San Francisco, California. October 7.
- ERRG. 2012a. Final Remedial Action Completion Report for Installation Restoration Sites 07 and 18 at Parcel B, Hunters Point Naval Shipyard, San Francisco, California. May.
- ERRG. 2012b. Final Operation and Maintenance Plan for Installation Restoration Sites 07 and 18 in Parcel B, Hunters Point Naval Shipyard, San Francisco, California. October.
- ERRG. 2015a. E-mail Message on Information Related to Aboveground Storage Tanks, Visual Inspection of Buildings 115 and 120 and Discussion with Building 115 Manager. From John Sourial, ERRG. To Tim Mower, TriEco-Tt. January 15.
- ERRG. 2015b. Final Addendum 4 to the Final Remedial Action Work Plan for Parcel B (Excluding Installation Restoration Sites 07 and 18), Hunters Point Naval Shipyard, San Francisco, California. February 9.
- ERRG. 2016. Final Operation and Maintenance Plan for Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California. June.
- ERRG. 2017. Final Remedial Action Completion Report for Durable Covers Remedy in Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California. January.
- ERRG and URS Corporation. 2004. Final Cost and Performance Report, Zero-Valent Iron Injection Treatability Study, Building 123, Parcel B, Hunters Point Shipyard, San Francisco, California. June 25.
- Harding Lawson Associates (HLA). 1990. Preliminary Assessment Other Areas/Utilities, Naval Station Treasure Island Hunters Point Annex, San Francisco, California. October 19.
- HLA. 1994. Draft Final Parcel D Site Inspection Report, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California. May 30.

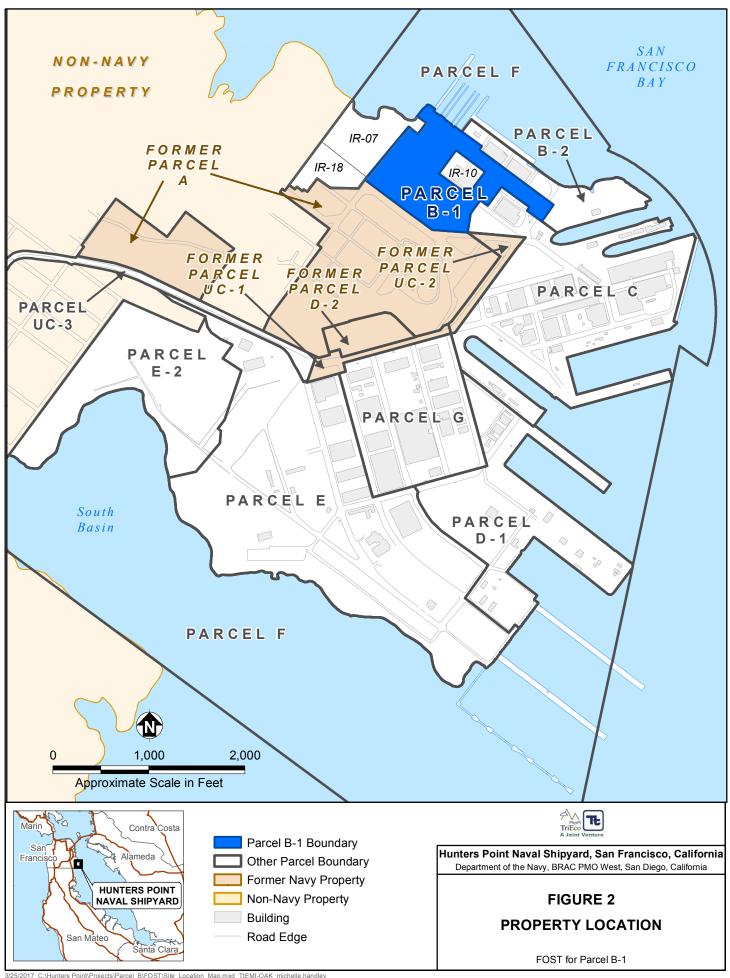
- Innovative Technical Solutions, Inc. (ITSI). 2011. Final Petroleum Hydrocarbon Site Closeout Report, Parcel B, Hunters Point Shipyard, San Francisco, California. August.
- ITSI. 2012a. Final Action Memorandum, Removal of Underground Storage Tank (UST) 113A, IR Site 42, Parcel B, Hunters Point Naval Shipyard, San Francisco, California. March.
- ITSI. 2012b. Final Petroleum Hydrocarbon Site Closeout Report, Parcel B, Site-Specific Attachment for AOC 46-D, Revision 1, Hunters Point Naval Shipyard, San Francisco, California. June.
- IT Corporation. 1997. Storm Drain Sediment Removal Action Report, Hunters Point Shipyard, San Francisco, California. January.
- IT Corporation. 1999. Completion Report, Exploratory Excavations, Hunters Point Naval Shipyard, San Francisco, California. June.
- IT Corporation. 2000. Post-Construction Report, Hunters Point Shipyard, San Francisco, California. March 1.
- IT Corporation. 2001. Phase II Soil Vapor Extraction Treatability Study Report, Building 134, IR-25, Parcel C, Hunters Point Shipyard, San Francisco, California. December 31.
- IT Corporation. 2002a. Draft Phase II Soil Vapor Extraction Treatability Study Report, Building 123, IR-10, Parcel B, Hunters Point Shipyard, San Francisco, California. February 14.
- IT Corporation. 2002b. Draft Final Waste Consolidation Report, Parcel B, Hunters Point Shipyard, San Francisco, California. November 21.
- MACTEC Engineering and Consulting, Inc. (MACTEC). 2008. Final Finding of Suitability to Lease (FOSL), Buildings 103, 104, 115, 116, 117, 120, 125, and 606, Open Spaces 1 and 2, Hunters Point Shipyard, San Francisco, California. February 4.
- Mare Island Naval Shipyard. 1994. Asbestos Survey Report, Naval Station Treasure Island, Hunters Point Annex, Parcels B through E, San Francisco, California.
- Naval Energy and Environmental Support Activity (NEESA). 1984. Initial Assessment Study (IAS) Hunters Point Naval Shipyard (Disestablished), San Francisco, California. NEESA 13-059. October.
- Naval Sea Systems Command (NAVSEA). 2004. Final Historical Radiological Assessment, Volume 2, History of the Use of General Radioactive Materials, 1939 2003, Hunters Point Shipyard. August 31.
- PRC Environmental Management, Inc., Harding Lawson Associates, Levine-Fricke, and Uribe and Associates. 1996. Parcel B Remedial Investigation, Draft Final Report, Hunters Point Shipyard, San Francisco, California. June 3.

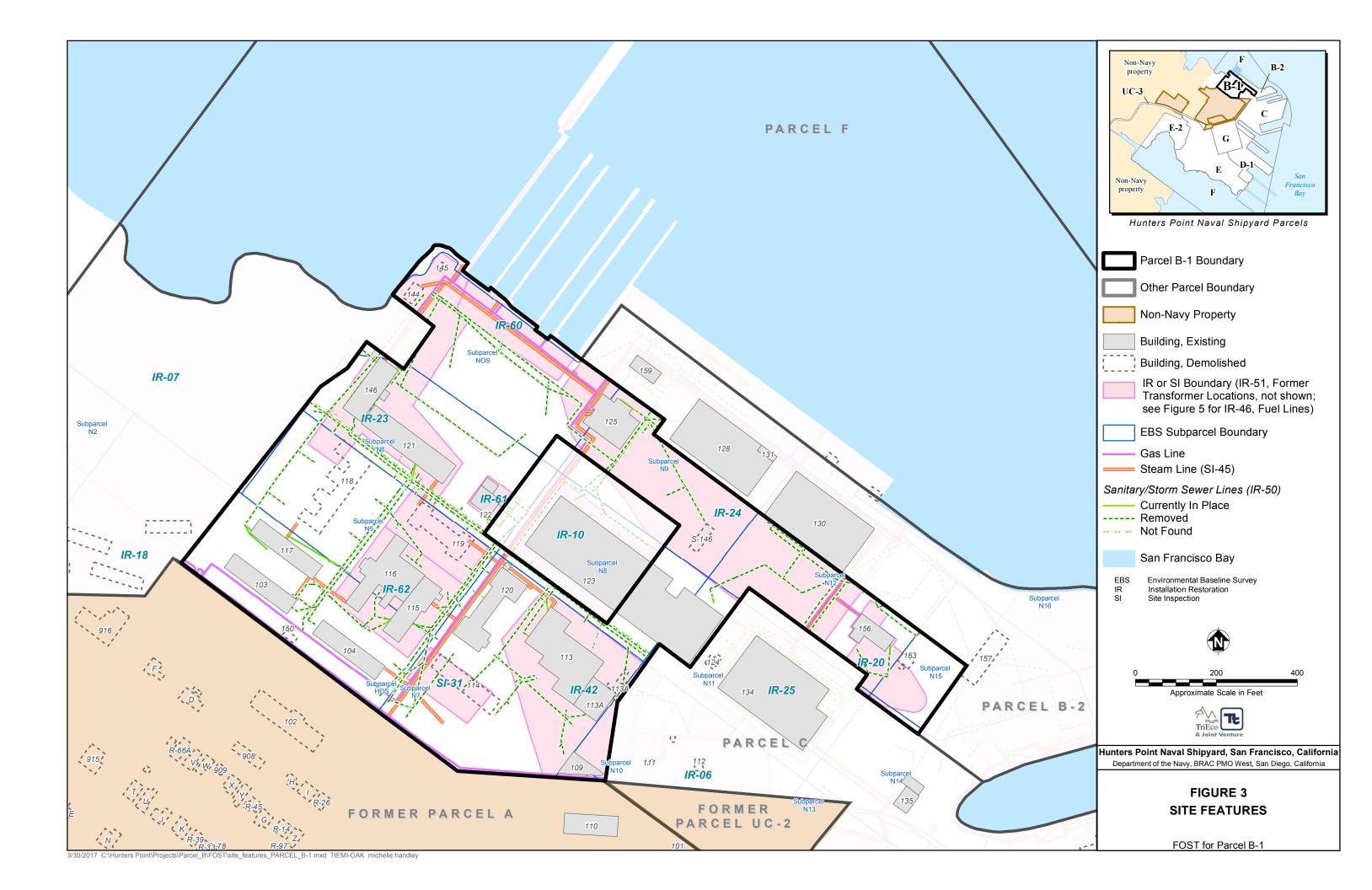
- Public Works Center San Francisco Bay (PWCSFB). 1996. PCB Survey of High and Low Voltage Electrical Equipment, Hunters Point Annex, San Francisco, California. April 2.
- Sealaska Environmental Services, LLC (Sealaska). 2013. Final Technical Memorandum, Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G, and UC-2, Hunters Point Naval Shipyard, San Francisco, California. March.
- SES-TECH Remediation Services, Inc. 2009. Final Removal Action Completion Report, Time-Critical Removal Action for the Methane Source Area at IR-07, Parcel B, Hunters Point Shipyard, San Francisco, California. May 22.
- Shaw Environmental, Inc. (Shaw). 2005. In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study, Remedial Unit C5, Building 134, Installation Restoration Site 25, Hunters Point Shipyard, San Francisco, California. Final. November 23.
- Shaw. 2007. Final New Preliminary Screening Criteria and Petroleum Program Strategy, Hunters Point Shipyard, San Francisco, California. December 21.
- Tetra Tech EC, Inc. 2009. Final Basewide Dust Control Plan, Hunters Point Shipyard, San Francisco, California. June 12.
- Tetra Tech EC, Inc. 2012. Final Radiological Removal Action Completion Report, Parcel B, Hunters Point Naval Shipyard, San Francisco, California. March 2.
- Tetra Tech EC, Inc. 2014. Addendum to Parcels B and G Radiological Removal Action Completion Reports, Hunters Point Naval Shipyard, San Francisco, California. November.
- Tetra Tech EC, Inc. 2016. Final Addendum to Parcels B and G Radiological Removal Action Completion Reports, Hunters Point Naval Shipyard, San Francisco, California. April.
- Tetra Tech EM Inc. 1998. Final Basewide Environmental Baseline Survey, Revision 01, Hunters Point Shipyard, San Francisco, California. September 4.
- Tetra Tech EM Inc. 2003. Final Soil Vapor Extraction Confirmation Study Summary, Building 123, Installation Restoration Site 10, Parcel B, Hunters Point Shipyard, San Francisco, California. August 19.
- Tetra Tech EM Inc. 2004. Final Finding of Suitability to Transfer for Parcel A (Revision 3), Hunters Point Shipyard, San Francisco, California. October 8.
- Tetra Tech EM Inc. and ITSI. 2004. Final Parcel B Shoreline Characterization Technical Memorandum, Hunters Point Shipyard, San Francisco, California. March 23.
- Tetra Tech Foster Wheeler Inc. 2004. Draft Final Post Construction Report: Decontaminate Process Equipment, Conduct Waste Consolidation, and Provide Asbestos Services in Parcels B, C, D, and E, Hunters Point Shipyard, San Francisco, California. July 9.

- Trevet. 2016. Draft Management and Monitoring Approach Sampling and Analysis Plan for Basewide Groundwater Monitoring Program, Hunters Point Naval Shipyard, San Francisco, California. December.
- U.S. Environmental Protection Agency (EPA). 2014. Concurrence with Final Remedial Action Completion Report (RACR) for Soil Hotspot Locations at Parcels B, D- 1, and G and Soil Stockpiles at Parcels D-1 and G, dated October 7, 2011, and Addendum One to this RACR, dated April 4, 2014. Letter from Angeles Herrera, Assistant Director, Federal Facilities and Site Cleanup Branch, EPA to Thomas Macchiarella, Acting BRAC Environmental Coordinator, U.S. Navy. September 30.
- YEI Engineers, Inc. (YEI). 1988. Utilities Technical Report, Phase 2, Volumes 1 through 9, Hunters Point Annex, San Francisco, California. December.

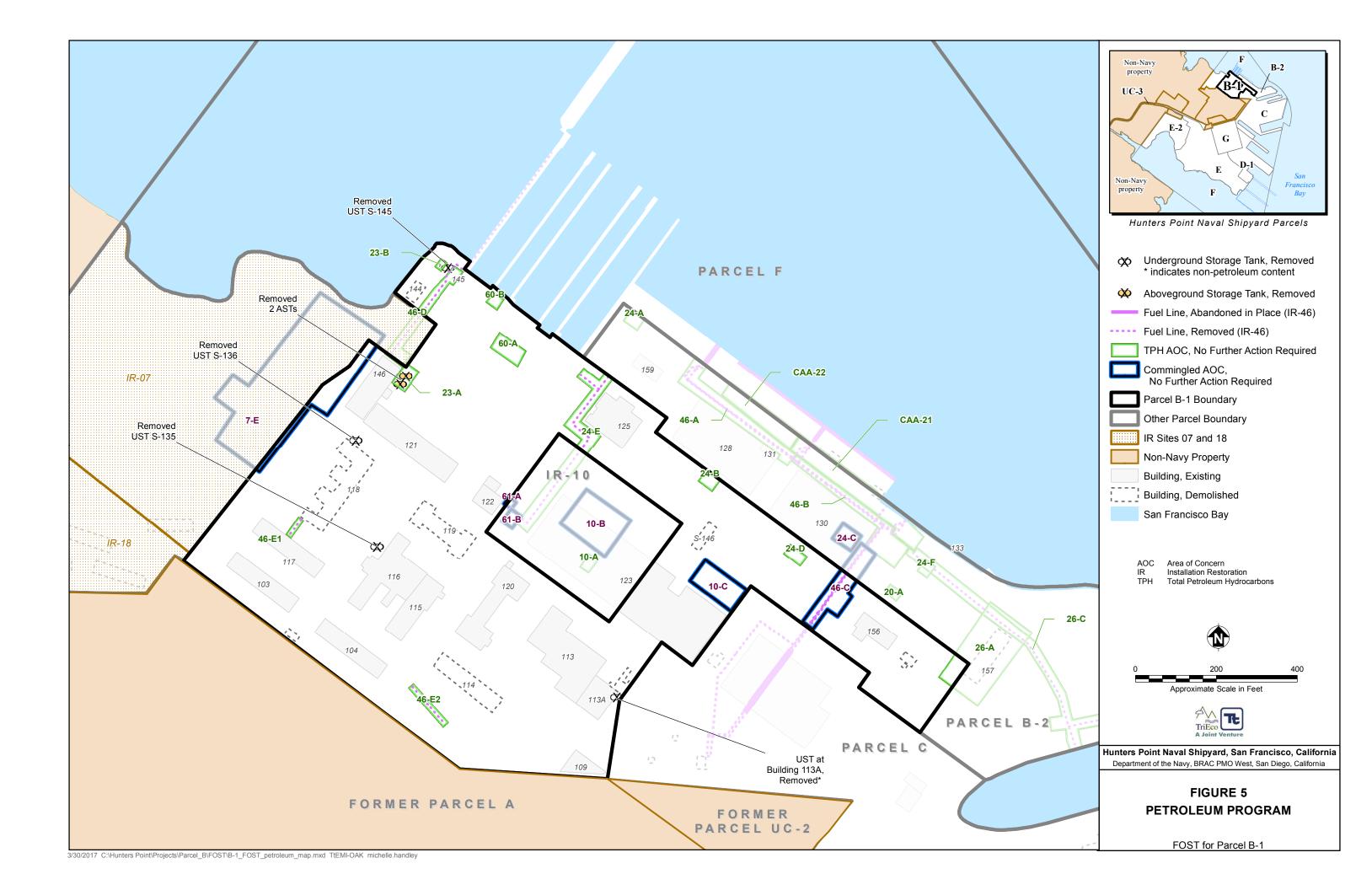


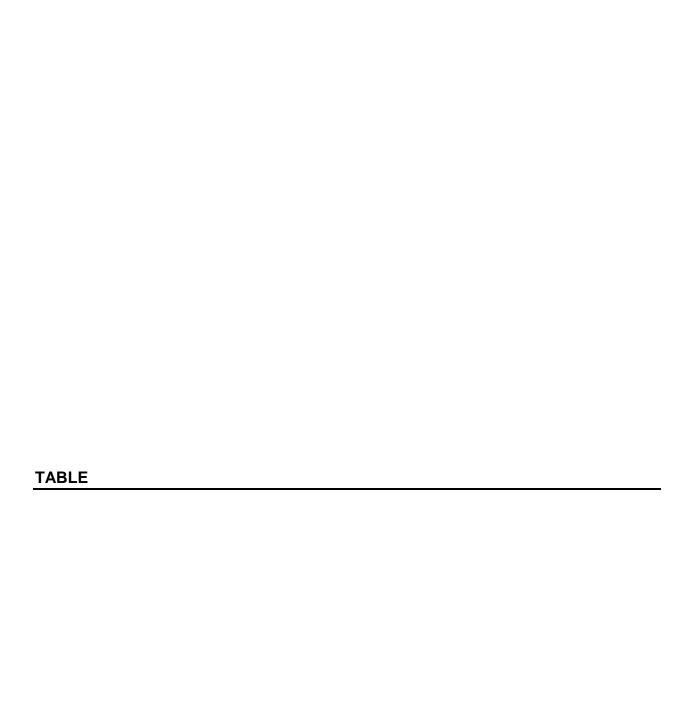












#### **TABLE 1: ENVIRONMENTAL REQUIREMENTS**

Finding of Suitability to Transfer for Parcel B-1 Hunters Point Naval Shipyard, San Francisco, California

			En	vironm	ental Require	ments		
Applicable to the Parcel	Presence of Hazardous Substances	CERCLA	Presence of Petroleum Products and Derivatives	UST and AST	Munitions and Explosives of Concern	Asbestos- Containing Material	Lead-Based Paint	Polychlorinated Biphenyls
Parcel B-1	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Notes:

AST Aboveground storage tank

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

UST Underground storage tank

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	
B-1	GROUNDWATER	1,1-DICHLOROETHANE	75-34-3	ETHANE, 1,1-DICHLORO-; ETHYLIDENE DICHLORIDE	U076	454 kg	UNKNOWN	UNKNOWN	R	Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	GROUNDWATER	1,1-DICHLOROETHENE	75-35-4	ETHENE, 1,1-DICHLORO-; VINYLIDENE CHLORIDE; 1-1-DICHLOROETHYLENE	U078	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	1,2-DICHLOROETHANE	107-06-2	ETHANE, 1-2-DICHLORO-; ETHYLENE DICHLORIDE	U077	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	1,2-DICHLOROETHENE (TOTAL)	540-59-01	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	1,3-DICHLOROBENZENE	541-73-1	BENZENE, 1,3-DICHLORO; M-DICHLOROBENZENE	U071	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	1,4-DICHLOROBENZENE	541-73-1	BENZENE, 1,3-DICHLORO; M-DICHLOROBENZENE	U071	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	2,6-DINITROTOLUENE	573-56-8	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	2-METHYLNAPHTHALENE	91-57-6	BETA-METHYLNAPTHALENE; BETA-METHYL NAPHTHALENE; 2-METHYLNAPTHALENE; METHYL-2-NAPHTHALENE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	4,4'-DDE	72-55-9	DDE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ACENAPHTHENE	83-32-9	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ACENAPHTHYLENE	208-96-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ALDRIN	309-00-2	1,4:5,8- DIMETHANONAPHTHALENE	P004	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ALPHA-BHC	319-84-6	NONE	NA	4.54 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	ALPHA-CHLORDANE	57-74-9	CHLORDANE; CHLORDANE, ALPHA & GAMMA ISOMERS; CHLORDANE (TECHNICAL MIXTURE & METABOLITES)	U036	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ALUMINUM	7429-90-5	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	ANTHRACENE	120-12-7	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	ANTIMONY	7440-36-0	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	ARSENIC	7440-38-2	NONE	D004	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BARIUM	7440-39-3	NONE	D005	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BENZENE	71-43-2	NONE	U019	4.54 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BENZO(A)ANTHRACENE	56-55-3	BENZ[A]ANTHRACENE; 1,2-BENZANTHRACENE	U018	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	BENZO(A)PYRENE	50-32-8	3,4-BENZOPYRENE	U022	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BENZO(B)FLUORANTHENE	205-99-2	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BERYLLIUM	7440-41-7	BERYLLIUM POWDER	P015	4.54 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BETA-BHC	319-85-7	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	1,2-BENZENEDICARBOXYLIC ACID; BIS(2-ETHYLHEXYL)ESTER: DEHP; DIETHYLHEXYL PHTHALATE	U028	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	BROMOMETHANE	74-83-9	METHANE, BROMO-; METHYL BROMIDE	U029	454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	CADMIUM	7440-43-9	NONE	D006	4.54 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	CARBON DISULFIDE	75-15-0	NONE	P022	45.4 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	CHLOROBENZENE	108-90-7	BENZENE, CHLORO-	U037	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	CHLOROFORM	67-66-3	METHANE, TRICHLORO-	U044	4.54 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	CHROMIUM	7440-47-3	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	CHROMIUM VI	NA	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	CHRYSENE	218-01-9	NONE	U050	45.4 kg	UNKNOWN	UNKNOWN	R	1

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	Action Taken
B-1	GROUNDWATER	CIS-1,2-DICHLOROETHENE	156-60-5	ETHENE, 1,2-DICHLORO (E); 1,2-DICHLOROETHYLENE	U079	454 kg	UNKNOWN	UNKNOWN	R	Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	GROUNDWATER	COBALT	7440-48-4	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	COPPER	7440-50-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	DELTA-BHC	319-86-8	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	DIBENZ(A,H)ANTHRACENE	53-70-3	DIBENZO(A,H)ANTHRACENE; 1,2:5,6-DIBENZANTHRACENE	U063	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ENDOSULFAN SULFATE	1031-07-8	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ENDRIN ALDEHYDE	7421-93-4	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	ENDRIN KETONE	72-20-8	ENDRIN & METABOLITES	P051	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	ETHYLBENZENE	100-41-4	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	FLUORANTHENE	206-44-0	NONE	U120	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	FLUORENE	86-73-7	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	GAMMA-CHLORDANE	57-74-9	CHLORDANE; CHLORDANE, ALPHA & GAMMA ISOMERS; CHLORDANE (TECHNICAL MIXTURE & METABOLITES)	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	HEPTACHLOR	76-44-8	NONE	P059	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	HEPTACHLOR EPOXIDE	1024-57-3	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	HEXACHLOROETHANE	67-72-1	ETHANE, HEXACHLORO-	U131	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	INDENO(1,2,3-CD)PYRENE	193-39-5	1,10-(1,2-PHENYLENE)PYRENE	U137	45.4 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	IRON	7439-89-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	LEAD	7439-92-1	NONE	NA	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	M,P-XYLENES	1330-20-7	BENZENE, DIMETHYL-	U239	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	MANGANESE	7439-96-5	NONE	NA	NA NA	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	MERCURY	7439-97-6	NONE	U151	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	METHYLENE CHLORIDE	75-09-2	DICHLOROMETHANE; METHANE, DICHLORO-	U080	454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	MOLYBDENUM	7439-98-7	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	NAPHTHALENE	91-20-3	NONE	U165	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	NICKEL	7440-02-0	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	N-NITROSODIPHENYLAMINE	86-30-6	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	PHENANTHRENE	85-01-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	PYRENE	129-00-0	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	SELENIUM	7782-49-2	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	SILVER	7440-22-4	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	TERT-BUTYL METHYL ETHER	1634-04-4	METHYL TERT-BUTYL ETHER	NA NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	TETRACHLOROETHENE	127-18-4	ETHENE, TETRACHLORO-; PERCHLOROETHYLENE; TETRACHLOROETHYLENE	U210	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	THALLIUM	7440-28-0	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	TOLUENE	108-88-3	BENZENE, METHYL-	U220	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	GROUNDWATER	TRANS-1,2-DICHLOROETHENE	156-60-5	ETHENE, 1,2-DICHLORO (E); 1,2-DICHLOROETHYLENE	U079	454 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	TRICHLOROETHENE	79-01-6	ETHENE, TRICHLORO-; TRICHLOROETHYLENE	U228	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	VANADIUM	7440-62-2	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	GROUNDWATER	VINYL CHLORIDE	75-01-4	ETHENE, CHLORIDE	U043	0.454 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	XYLENE (TOTAL)	1330-20-7	BENZENE, DIMETHYL-	U239	45.4 kg	UNKNOWN	UNKNOWN	R	]
B-1	GROUNDWATER	ZINC	7440-66-6	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	]

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	Action Taken
B-1	SOIL	1,1,1-TRICHLOROETHANE	71-55-6	ETHANE, 1,1,1-TRICHLORO; METHYL CHLOROFORM	U226	454 kg	UNKNOWN	UNKNOWN	R	Phase I Remedial Action (July 1998 to September 1999); Phase II Remedial Action (July 2000 to December 2001) (ChaduxTt 2008); Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	SOIL	1,1,2,2-TETRACHLOROETHANE	79-34-5	ETHANE, 1,1,2,2-TETRACHLORO-	U209	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,1,2-TRICHLOROETHANE	79-00-5	ETHANE, 1,1,2-TRICHLORO-	U227	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	1,1-DICHLOROETHANE	75-34-3	ETHANE, 1,1-DICHLORO-; ETHYLIDENE DICHLORIDE	U076	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,1-DICHLOROETHENE	75-35-4	ETHENE, 1,1-DICHLORO-; VINYLIDENE CHLORIDE; 1-1-DICHLOROETHYLENE	U078	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,1-DICHLOROPROPENE	563-58-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,2,4-TRIMETHYLBENZENE	95-63-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,2-DICHLOROETHANE	107-06-2	ETHANE, 1-2-DICHLORO-; ETHYLENE DICHLORIDE	U077	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,2-DICHLOROETHENE (TOTAL)	540-59-01	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,3,5-TRIMETHYLBENZENE	108-67-8	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	1,3-DICHLOROBENZENE	541-73-1	BENZENE, 1,3-DICHLORO; M-DICHLOROBENZENE	U071	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	2-BUTANONE	78-93-3	MEK; METHYL ETHYL KETONE	U159	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	2-CHLOROPHENOL	95-57-8	O-CHLOROPHENOL; PHENOL, 2-CHLORO-	U048	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	2-HEXANONE	591-78-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	2-METHYLNAPHTHALENE	91-57-6	BETA-METHYLNAPTHALENE; BETA-METHYL NAPHTHALENE; 2-METHYLNAPTHALENE; METHYL-2-NAPHTHALENE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	4,4'-DDD	72-54-8	BENZENE, 1,1'-(2,2- DICHLOROETHYLIDENE)BIS[4- CHLORO-]; DDD; TDE	U060	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	4,4'-DDE	72-55-9	BENZENE,1,1'-(2,2- DICHLOROETHENYLIDENE)BIS[4- CHLORO-];DDE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	4,4'-DDT	50-29-3	BENZENE, 1,1'-(2,2,2- TRICHLOROETHYLIDENE)BIS[4- CHLORO-]; DDT	U061	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	4-METHYL-2-PENTANONE	108-10-1	HEXONE; METHYL ISOBUTYL KETONE	U161	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	4-METHYLPHENOL	1319-77-3	CRESOL (CRESYLIC ACID)	U052	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ACENAPHTHENE	83-32-9	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ACENAPHTHYLENE	208-96-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ACETONE	67-64-1	2-PROPANONE	U002	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ALDRIN	309-00-2	1,4:5,8- DIMETHANONAPHTHALENE	P004	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ALPHA-BHC	319-84-6	NONE	NA	4.54 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	ALPHA-CHLORDANE	57-74-9	CHLORDANE; CHLORDANE, ALPHA & GAMMA ISOMERS; CHLORDANE (TECHNICAL MIXTURE & METABOLITES)	U036	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ALUMINUM	7429-90-5	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	ANTHRACENE	120-12-7	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	
B-1	SOIL	ANTIMONY	7440-36-0	NONE	NA	NA	UNKNOWN	UNKNOWN	R	Phase I Remedial Action (July 1998 to September 1999); Phase II Remedial Action (July 2000 to December 2001) (ChaduxTt 2008); Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	SOIL	AROCLOR-1242	53469-21-9	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	-
B-1	SOIL	AROCLOR-1254	11097-69-1	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	†
B-1	SOIL	AROCLOR-1260	11096-82-5	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	†
B-1	SOIL	ARSENIC	7440-38-2	NONE	D004	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BARIUM	7440-39-3	NONE	D005	454 kg	UNKNOWN	UNKNOWN	R	†
B-1	SOIL	BENZENE	71-43-2	NONE	U019	4.54 kg	UNKNOWN	UNKNOWN	R	†
B-1	SOIL	BENZO(A)ANTHRACENE	56-55-3	BENZ[A]ANTHRACENE; 1,2-BENZANTHRACENE	U018	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	BENZO(A)PYRENE	50-32-8	3,4-BENZOPYRENE	U022	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BENZO(B)FLUORANTHENE	205-99-2	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BENZO(G,H,I)PERYLENE	191-24-2	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BENZO(K)FLUORANTHENE	207-08-9	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BENZOIC ACID	65-85-0	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BERYLLIUM	7440-41-7	BERYLLIUM POWDER	P015	4.54 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BETA-BHC	319-85-7	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	1,2-BENZENEDICARBOXYLIC ACID; BIS(2-ETHYLHEXYL)ESTER; DEHP; DIETHYLHEXYL PHTHALATE	U028	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	BROMODICHLOROMETHANE	75-27-4	DICHLOROBROMOMETHANE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	BUTYLBENZYLPHTHALATE	85-68-7	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CADMIUM	7440-43-9	NONE	D006	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CARBAZOLE	86-74-8	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CARBON DISULFIDE	75-15-0	NONE	P022	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CARBON TETRACHLORIDE	56-23-5	METHANE, TETRACHLORO	U211	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHLOROBENZENE	108-90-7	BENZENE, CHLORO-	U037	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHLOROFORM	67-66-3	METHANE, TRICHLORO-	U044	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHLOROMETHANE	74-87-3	METHANE, CHLORO-; METHYL CHLORIDE	U045	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHROMIUM	7440-47-3	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHROMIUM VI	NA	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHRYSENE	218-01-9	NONE	U050	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CHRYSOTILE ASBESTOS	1332-21-4	2,3	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CIS-1,2-DICHLOROETHENE	156-60-5	ETHENE, 1,2-DICHLORO (E); 1,2-DICHLOROETHYLENE	U079	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CIS-1,3-DICHLOROPROPENE	542-75-6	1-PROPENE, 1,3-DICHLORO-	U084	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	COBALT	7440-48-4	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	COPPER	7440-50-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CYANIDE	NA	CYANIDE COMPOUNDS	P030	4.54 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	DIBENZ(A,H)ANTHRACENE	53-70-3	DIBENZO(A,H)ANTHRACENE; 1,2:5,6-DIBENZANTHRACENE	U063	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	DIBENZOFURAN	132-64-9	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	DIBUTYLTIN	NA	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	
B-1	SOIL	DIELDRIN	60-57-1	2,7:3,6-DIMETHANONAPTHO[2,3- B]OXIRENE	P037	0.454 kg	UNKNOWN	UNKNOWN	R	Phase I Remedial Action (July 1998 to September 1999); Phase II Remedial Action (July 2000 to December 2001) (ChaduxTt 2008); Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	SOIL	DI-N-BUTYLPHTHALATE	84-74-2	DIBUTYL PHTHALATE; N-BUTYL PHTHALATE; 1,2-BENZENEDICARBOXYLIC ACID, DIBUTYL ESTER	U069	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ENDOSULFAN II	33213-65-9	BETA-ENDOSULFAN	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ENDOSULFAN SULFATE	1031-07-8	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ENDRIN	72-20-8	ENDRIN & METABOLITES	P051	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ENDRIN ALDEHYDE	7421-93-4	NONE	NA	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ENDRIN KETONE	72-20-8	ENDRIN & METABOLITES	P051	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ETHYLBENZENE	100-41-4	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	FLUORANTHENE	206-44-0	NONE	U120	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	FLUORENE	86-73-7	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	GAMMA-CHLORDANE	57-74-9	CHLORDANE; CHLORDANE, ALPHA & GAMMA ISOMERS; CHLORDANE (TECHNICAL MIXTURE & METABOLITES)	NA	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	INDENO(1,2,3-CD)PYRENE	193-39-5	1,10-(1,2-PHENYLENE)PYRENE	U137	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	IRON	7439-89-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	LEAD	7439-92-1	NONE	NA	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	M,P-XYLENES	1330-20-7	BENZENE, DIMETHYL-	U239	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	MANGANESE	7439-96-5	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	MERCURY	7439-97-6	NONE	U151	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	METHOXYCHLOR	72-43-5	BENZENE, 1,1'-(2,2,2- TRICHLOROETHYLIDENE)BIS[4- METHOXY]-	U247	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	METHYLENE CHLORIDE	75-09-2	DICHLOROMETHANE; METHANE, DICHLORO-	U080	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	MOLYBDENUM	7439-98-7	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	MONOBUTYLTIN	NA	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	NAPHTHALENE	91-20-3	NONE	U165	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	N-BUTYLBENZENE	104-51-8	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	NICKEL	7440-02-0	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	N-NITROSODIPHENYLAMINE	86-30-6	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	O-XYLENE	95-47-6	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	PARA-ISOPROPYL TOLUENE	99-87-6	NONE	NA	NA	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	PENTACHLOROPHENOL	87-86-5	NONE	F027	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	PHENANTHRENE	85-01-8	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	PHENOL	108-95-2	NONE	U188	454 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL	PYRENE	129-00-0	NONE	NA	2270 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	SEC-BUTYLBENZENE	135-98-8	NONE	NA	NA	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	SELENIUM	7782-49-2	NONE	NA	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	SILVER	7440-22-4	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	STYRENE	100-42-5	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	1

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	
B-1	SOIL	TETRACHLOROETHENE	127-18-4	ETHENE, TETRACHLORO-; PERCHLOROETHYLENE; TETRACHLOROETHYLENE	U210	45.4 kg	UNKNOWN	UNKNOWN	R	Phase I Remedial Action (July 1998 to September 1999); Phase II Remedial Action (July 2000 to December 2001) (ChaduxTt 2008); Final Amended Parcel B ROD (Navy 2009); Final Remedial Action (ERRG 2011, 2017).
B-1	SOIL	THALLIUM	7440-28-0	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	TOLUENE	108-88-3	BENZENE, METHYL-	U220	454 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	TRANS-1,2-DICHLOROETHENE	156-60-5	ETHENE, 1,2-DICHLORO (E); 1,2-DICHLOROETHYLENE	U079	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	TRANS-1,3-DICHLOROPROPENE	542-75-6	1-PROPENE, 1,3-DICHLORO-	U084	45.4 kg	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	TRIBUTYLTIN	NA	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	TRICHLOROETHENE	79-01-6	ETHENE, TRICHLORO-; TRICHLOROETHYLENE	U228	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	TRICHLOROFLUOROMETHANE	75-69-4	METHANE, TRICHLOROFLUORO-	U121	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	VANADIUM	7440-62-2	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL	VINYL CHLORIDE	75-01-4	ETHENE, CHLORIDE	U043	0.454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	XYLENE (TOTAL)	1330-20-7	BENZENE, DIMETHYL-	U239	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	ZINC	7440-66-6	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL	CESIUM-137	NA	NONE	NA	1 Curie	UNKNOWN	UNKNOWN	R	Radiological TCRA (2006-2010) (TtEC 2012, 2014, 2016); Final Amended Parcel B ROD (Navy 2009).
B-1	SOIL	RADIUM-226	NA	NONE	NA	0.1 Curie	UNKNOWN	UNKNOWN	R	1
B-1	SOIL	STRONTIUM-90	NA	NONE	NA	0.1 Curie	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	1,1,2-TRICHLORO-1,2,2- TRIFLUOROETHANE	76-13-1	ETHANE, TRICHLOROTRIFLUORO FREON 113	NA	NA	UNKNOWN	UNKNOWN	R	Final Amended Parcel B ROD (institutional controls) (Navy 2009)
B-1	SOIL GAS	2-BUTANONE	78-93-3	MEK; METHYL ETHYL KETONE	U159	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	ACETONE	67-64-1	2-PROPANONE	U002	2270 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	BENZENE	71-43-2	NONE	U019	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CARBON DISULFIDE	75-15-0	NONE	P022	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CARBON TETRACHLORIDE	56-23-5	METHANE, TETRACHLORO	U211	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CHLOROBENZENE	108-90-7	BENZENE, CHLORO-	U037	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CHLOROFORM	67-66-3	METHANE, TRICHLORO-	U044	4.54 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CIS-1,2-DICHLOROETHENE	156-60-5	ETHENE, 1,2-DICHLORO (E); 1,2-DICHLOROETHYLENE	U079	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	CYCLOHEXANE	110-82-7	NONE	U056	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	ETHYLBENZENE	100-41-4	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	M,P-XYLENES	1330-20-7	BENZENE, DIMETHYL-	U239	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	METHYLCYCLOHEXANE	108-87-2	NONE	NA	NA	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	METHYLENE CHLORIDE	75-09-2	DICHLOROMETHANE; METHANE, DICHLORO-	U080	454 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	NAPHTHALENE	91-20-3	NONE	U165	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	O-XYLENE	95-47-6	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL GAS	PROPYLBENZENE	103-65-1	NONE	NA	NA	UNKNOWN	UNKNOWN	R	]
B-1	SOIL GAS	STYRENE	100-42-5	NONE	NA	454 kg	UNKNOWN	UNKNOWN	R	]
B-1	SOIL GAS	TETRACHLOROETHENE	127-18-4	ETHENE, TETRACHLORO-; PERCHLOROETHYLENE; TETRACHLOROETHYLENE	U210	45.4 kg	UNKNOWN	UNKNOWN	R	
B-1	SOIL GAS	TOLUENE	108-88-3	BENZENE, METHYL-	U220	454 kg	UNKNOWN	UNKNOWN	R	]

Finding of Suitability for Transfer of Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California

Parcel	Media	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	
B-1	SOIL GAS	TRICHLOROETHENE	79-01-6	ETHENE, TRICHLORO-; TRICHLOROETHYLENE	U228	45.4 kg	UNKNOWN	UNKNOWN		Final Amended Parcel B ROD (institutional controls) (Navy 2009)
B-1	SOIL GAS	TRICHLOROFLUOROMETHANE	75-69-4	METHANE, TRICHLOROFLUORO-, FREON 11	NA	NA	UNKNOWN	UNKNOWN	R	

#### Notes

The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h).

- This table was prepared in accordance with 40 CFR 302.4. The substances that do not have chemical-specific breakdown (and associated annual reportable quantity) are not listed in 40 CFR 302.4, and therefore have no corresponding regulatory synonyms, no RCRA waste numbers, and no reportable quantities.
- The property may contain pesticide residue from pesticides that have been applied in the management of the property. The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling, and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA 7 U.S.C. Sec. 136, et seq.), its implementing regulations, and according to the labeling provided with such substances. It is the Navy's position that it shall have no obligation under the covenants provided pursuant to Section 120(h)(3)(A)(ii) (of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 9620(h)(3)(A)(iii), for the remediation of legally applied pesticides.

BHC Hexachlorocyclohexane

S Chemical Abstracts Service

CFR Code of Federal Regulations

DDD Dichlorodiphenyldichloroethane

DDE Dichlorodiphenyldichloroethane
DDT Dichlorodiphenyltrichloroethane

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act of 1972

kg Kilogram

NA Not Applicable

ROD Record of Decision

RCRA Resource Conservation and Recovery Act

TCRA Time-Critical Removal Action

U.S.C. United States Code

#### References:

ChaduxTt. 2008. Final Construction Summary Report for Parcel B, Hunters Point Shipyard, San Francisco, California. July 25.

Engineering/Remediation Resources Group, Inc. (ERRG) 2011. Final Remedial Action Completion Report for Soil Hotspot Locations in Parcels B, D-1, and G and Soil Stockpiles at Parcels D-1 and G, Hunters Point Naval Shipyard, San Francisco, California. October 7.

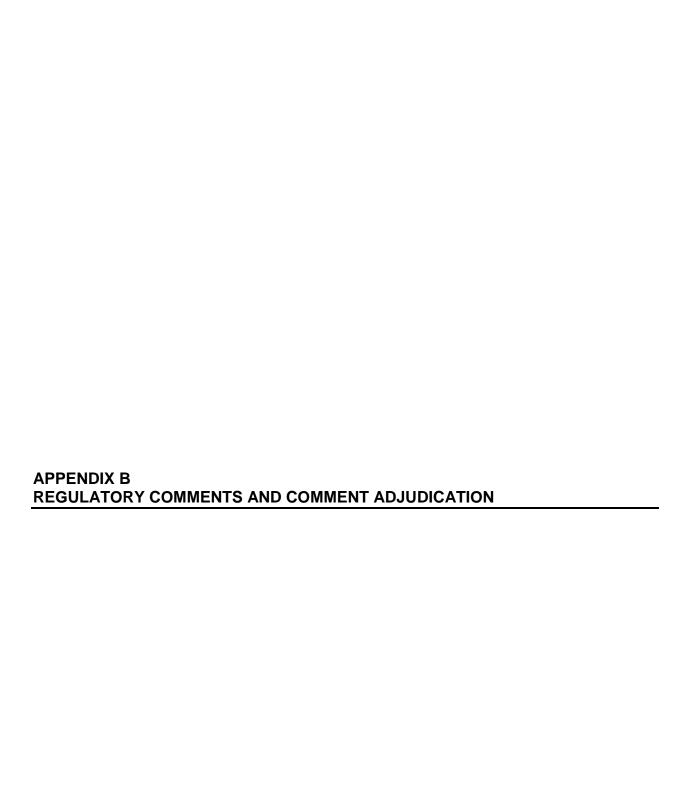
ERRG. 2017. Final Remedial Action Completion Report for Durable Covers Remedy in Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California. January.

Navy. 2009. Final Amended Parcel B Record of Decision, Hunters Point Shipyard, San Francisco, California. January 14.

Tetra Tech EC, Inc. (TtEC) 2012. Final Radiological Removal Action Completion Report, Parcel B, Hunters Point Naval Shipyard, San Francisco, California. March 2.

TtEC. 2014. Addendum to Parcels B and G Radiological Removal Action Completion Reports, Hunters Point Naval Shipyard, San Francisco, California. November.

TtEC. 2016. Final Addendum to Parcels B and G Radiological Removal Action Completion Reports, Hunters Point Naval Shipyard, San Francisco, California. April.



#### RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015

The table below contains the responses to comments received from the regulatory agencies on the "Draft Finding of Suitability to Transfer for Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California," dated March 2015. The comments addressed below were received from the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), the San Francisco Bay Regional Water Quality Control Board (Water Board), and the City and County of San Francisco Department of Public Health (city). Throughout this table, *italicized* text represents additions to the document and strikeout text indicates deletions. Also throughout this table, references to page, section, table, and figure numbers pertain to the new document unless otherwise indicated.

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	o Comments fror	m U.S. Environmental Protection Agency (Lily Lee, date	d April 22, 2015)
General Com	nments		
1.		At IR-10, USEPA's comments on the February, 2015, draft Remedial Action Completion Report for Parcel B-1 asked questions about whether soil vapor extraction (SVE) has reached asymptotic conditions, potential sources not yet characterized under Building 123, and other concerns related to trichloroethylene in soil gas. Further discussion is ongoing regarding these questions, so USEPA may make future comments regarding this issue based on these discussions.	Comment noted. The finding of suitability to transfer (FOST) has been revised to incorporate the carve-out area in Installation Restoration (IR) Site 10.
2.		As a reminder, USEPA's concurrence letter on the final FOST for Parcel B-1 will include the usual reservations regarding post-transfer discoveries of hazardous substances, including lead-based paint and pesticides.	The Navy notes and understands EPA's comment.
3.		The text makes reference at various points to forthcoming work (e.g. scanning) and documents anticipated. Please note that USEPA may have additional comments after review of those in the future.	Comment noted.

Comment Number	Section/ Page	Comment	Response to Comment
Specific Con	nments		
1.	Section 3.1, Comprehensive Environmental Response, Compensation, and Liability Act, Pages 2 and 3	The reader would get a clearer picture of the site history if the text could explain specifically why remediation was placed on hold in 2001 and the 1997 ROD had to be amended. For example, it could explain that further delineation of the groundwater plume revealed that concentrations in groundwater were found to be higher and the groundwater plume was more extensive, potential vapor intrusion issues, etc. It could also explain how the revetment is protecting ecological receptors in the bay from what forms of contamination.	Detailed information on the history of the decisions made for Parcel B is included in the amended record of decision (ROD) (Navy 2009). The text was not revised as a result of this comment.
2.	Section 3.1, Comprehensive Environmental Response, Compensation, and Liability Act, Page 3	The last paragraph of this section appears to indicate that the human health risk assessment (HHRA) for Parcel B-1 was completed in 2007, but the original HHRA was completed for the 1996 Parcel B Remedial Investigation Report. The 2007 HHRA should be described as a revised or updated HHRA.	The text has been revised as follows.  "All of the Property was included in an updated human health risk assessment"
3.	Section 3.1.2, Remedial and Removal Actions after the 1997 ROD, 4th bullet	Please provide more details regarding the Navy's actions.	The text has been expanded as follows.  "Activities at the Property included surveys of industrial process equipment for PCB content and abatement of ACM (Tetra Tech Foster Wheeler Inc. 2004)."  Additional, specific details are available in the cited report.

Comment Number	Section/ Page	Comment	Response to Comment
4.	Section 3.1.3, Remedial and Removal Actions after the 2009 Amended ROD, Page 5 and Section 3.3.2, USTs, Page 8	The information in Sections 3.1.3 and 3.3.2 about the underground storage tank (UST) discovered at Building 113A is inconsistent. Section 3.1.3 states that "the tank was suspected to contain gasoline." Section 3.3.2 states that the UST "contained petroleum and solvents." Please revise the text to present consistent information about UST 113A.	The text in Section 3.1.3 has been revised as follows.  "the tank was suspected to contain <i>petroleum and solvents</i> gasoline."
5.	Section 3.1.3, Remedial and Removal Actions after the 2009 Amended ROD, Page 6, O&M Plan	The text states "Long-term monitoring and maintenance requirements for the durable covers at Parcels B-1 and B-2 will be detailed in the post-construction O&M plan, which is scheduled to be submitted after approval of the RACR for Parcel B-2 in 2016." Please explain the status of O&M requirements during the period of time after transfer and before this anticipated revised long-term plan.	The cited text has been deleted because the final operation and maintenance (O&M) plan for Parcel B-1 has been prepared. The remaining text has been revised to reference the final O&M plan (Engineering/Remediation Resources Group Inc. [ERRG] 2016).

Comment Number	Section/ Page	Comment	Response to Comment
6.	Section 3.1.4, Radiological Concerns, Pages 6 and 7	Please include a brief summary of the remedy selected in the ROD to address radiological contamination of buildings, sewers, and storm drains.	The text has been expanded as follows.  "The TCRA involved excavating radiologically impacted storm drain and sanitary sewer lines and surrounding soil to achieve the removal action cleanup objectives. A total of 6,610 soil samples were collected to support the radiological removals across Parcel B. The TCRA also included decontaminating radiologically impacted structures, surveying buildings and former building sites, screening removed materials, and transporting contaminated materials off site to an appropriate disposal facility. The TCRA met the remedial action objectives in the amended ROD"

Comment Number	Section/ Page	Comment	Response to Comment
7.	Section 3.5, Asbestos- Containing	Please clarify at the beginning of the paragraph that all the buildings listed are located in Parcel B-1. Please also clarify at the end of the paragraph that some buildings	The text already indicates "Buildings 103, 104and 163 at the Property"
	Material, Page 9	have been remediated, but that in spite of remediation ACM or suspected ACM remains in all buildings on Parcel B-1. More specifically, the first paragraph states	The text at the end of the paragraph has been expanded as follows.
		that asbestos-containing material (ACM) debris was "repaired, encapsulated, or removed and disposed" between 1995 and 1997 "in 82 buildings at HPNS [Hunters Point Naval Shipyard]," but does not list the	"Even though remediation has been conducted, ACM or suspected ACM is assumed to remain in all buildings at the Property and any remaining steam lines at the Property."
		buildings in Parcel B-1 that were included in this action. The affected Parcel B-1 buildings are listed for the 1993 survey and the 2001-2002 survey. Please revise the text to list the B-1 buildings that were included in the 1995-	The text has been expanded as follows to describe ACM remediation.
		1997 ACM action	"Buildings 103, 104, 109, 113, 113A, 115, 116, 117, 120, 121, 122, 123, 125, 144, 146, 150, 156, and 163 at the Property were found to contain either ACM, assumed ACM, or suspected ACM. The Navy PWCSFB conducted remediation for ACM <i>in these</i>
			buildings in 1995 to 1997 (except Buildings 122, 144, and 150, where no remediation was required)."
8.	Section 3.6, Lead-based	To clarify, we suggest you specify that comments apply to "all" buildings. For example, here are suggested	The text has been revised as requested.
	Paint, Page 10	edits: "however, <u>all</u> buildings on the Property are assumed to contain LBP based on their known or assumed dates of construction. <u>All of the buildings</u> at the	
		Property were constructed in the 1940s and 1950s."	

Comment Number	Section/ Page	Comment	Response to Comment
9.	Section 3.6, Lead-based Paint, Page 10	Lead-based paint (LBP) chips sometimes flake off buildings at Parcel B-1, and they move over the durable cover through swales toward San Francisco Bay. At Parcel B-1, the Navy has implemented best management practices (BMPs) such as installing a series of wattles to trap and limit this release. Paragraph 3 will be more thorough and accurate if it makes reference to this movement of LBP and the Navy's measures to address it.	The text has been expanded as follows.  "The Navy is not aware of any LBP that has been released into the environment and poses a threat to human health on the Property. In addition, land use restrictions that will be carried forward for the entire area of the Property will ensure that any potential LBP in soil that may exist in the vicinity of the structures will remain beneath the durable cover and will not pose a human health threat. Migration of LBP chips that may flake off existing buildings onto the durable cover is limited by best management practices, such as gravel bag check dams in drainage swales."
10.	Section 3.7, Polychlorinated Biphenyls, Page 11, Paragraph 3	Were the remaining transformers removed and disposed of as scheduled in 1998? If documentation of the 1998 removal and disposal is not available, then if these could potentially still remain on the site inside of buildings, then please document this possibility and specify whether buildings where they could be located are secured.	The sentence describing the planned removals has been deleted to avoid confusion. The three pieces of electrical equipment in question all have polychlorinated biphenyl (PCB) contents less than 50 parts per million (ppm) and, therefore, would be classified as "non-PCB" under the Toxic Substances Control Act. The PCB content of these pieces of equipment is also less than 5 ppm, which is the California threshold for disposal of PCB waste liquid.
11.	Section 4.0, Adjacent Parcels, Page 12	To be more complete, please add that Parcel B-2 is located to the northeast and east of Parcel B-1 and Parcel C is located to the southeast of Parcel B-1.	The text has been revised as requested.

Comment Number	Section/ Page	Comment	Response to Comment
12.	Section 4.0, Adjacent Parcels, Page 13	The description of the soil remedial action at Parcel B-2 should be updated to state that the construction of the shoreline revetment is complete (i.e., it is no longer 87 percent complete and the revetment now covers the 230 feet of shoreline where its construction had been stopped due to the discovery of total petroleum hydrocarbon [TPH]-contaminated soil).	The text has been revised as follows to indicate that the remedy for soil has been completed.  "Excavation and off-site disposal in selected areas has been is partially completed. Soil that exceeded the remediation goal for lead was excavated and disposed of off site from one area in 2010 (ERRG 2011).  Remediation for TPH-contaminated soil has been is being completed within the southeastern ends of corrective action area [CAA] 21 and AOC 46-B (ERRG 2015b). Installation of parcel-wide durable covers, including the shoreline revetment, has been is mostly completed. Construction of the asphalt cover is complete, and construction of the shoreline revetment is about 87 percent complete. About 230 feet of shoreline within or adjacent to CAA-21 remains unfinished, pending completion of the excavation and disposal of TPH contaminated soil described above."

Comment Number	Section/ Page	Comment	Response to Comment
13.	Section 4.0, Adjacent Parcels, Page 13 and 14	Please add more details regarding potential contamination from VOC's in soil vapor from Parcel B-2 and Parcel C.	The text in the third paragraph has been revised as follows.  "However, tThe soil gas survey conducted in 2010 at Parcel B (Sealaska 2013) included samples along the boundary between the Property and Parcel C and indicated there is a potential for soil gas to migrate from Parcel C to the Property, therefore, provides an indication of potential soil gas migration."
			The text already indicates that "Areas of known VOC contamination in soil and groundwater at Parcel C have been adequately characterized and are undergoing active remediation. Remediation is expected to address any potential migration of VOCs in soil gas from Parcel C."

Comment Number	Section/ Page	Comment	Response to Comment
14.	Section 4.0, Adjacent Parcels, Northeast – Parcel B-2 and San Francisco Bay (Parcel F), Page 13, Second Paragraph, First Sentence	Please remove the second period.	This typographical error has been corrected.
15.	Section 4.0, Adjacent Parcels, Page 14	Please revise the text to provide more complete information about the relation between groundwater contamination at RU-C5 and Parcel B-1, including whether any contamination has migrated onto Parcel B-1 and the timeframe for remediation of this groundwater contaminant plume.	The text has been expanded as follows.  "COCs in groundwater at RU-C5 have not migrated to the Property."
16.	Section 4.0, Adjacent Parcels, Page 14	Please revise the text to include the timeframe for soil gas remediation in Parcel C areas that are adjacent to Parcel B-1.	The text has been expanded as follows.  "Soil gas: SVE for source reduction of VOCs (in progress). The operational goal is for VOC concentrations to be consistently less than treatment criteria with decreasing trends by the end of 2018."

Comment Number	Section/ Page	Comment	Response to Comment
17.	Section 4.0, Adjacent	The text under "Ongoing and completed remedial actions," has a single statement about remediation of	The text has been expanded as follows.
	Parcels, Page 14	groundwater contamination at Parcel C, but a number of treatability studies have reduced groundwater	"Previous treatability studies at RU-C5 have also reduced the concentrations of VOCs in groundwater
		contaminant concentrations in RU-C5. Since groundwater in this area is flowing onto Parcel B-1, the	using a variety of methods including thermal conduction heating, soil vapor extraction, and aerobic
		FOST would provide a complete picture if it included a summary of previous actions that have reduced levels of contamination in groundwater at RU-C5.	and anaerobic biodegradation (IT Corporation 2001, Shaw 2005, CDM Smith 2012)."
18.	Table A-1	The Summary of Hazardous Substances Stored, Disposed of, or Released, only includes information	Although past chemical use could be presumed based on former Navy activities, records of chemicals stored
		about substances that were released. Please add hazardous substances stored or disposed of at the Property to the table, such as source chemicals. For	or disposed of at Parcel B-1 are not available. Consequently, Table A-1 was not revised.
		example, chromic acid would have been used for certain types of plating at IR-10 because there was hexavalent	
		chromium plume outside the west wall/loading dock. The source was probably excavated with the storm	
		drains and sanitary sewers. The Navy also probably used specific pesticides (e.g., DoD routinely used certain pesticides when they had wood buildings).	

#### RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	o Comments from	California Department of Toxic Substances Control (Nina	a Bacey, dated March 26, 2015)
Specific Con	nments		
1.	Section 3.1	Indicates the amended remedy included Institutional Controls (ICs) for radiologically impacted soil and structure. It also included ICs for other COCs in soil and groundwater that exceed screening level goals. Please revise.	The text has been revised as follows.  "Finally, the amended remedy was also expanded to included institutional controls (IC) and cleanup of radiologically impacted soil and structures and institutional controls (IC) for soil, soil gas, and groundwater."
2.	Section 3.7	It is not clear if the electrical equipment that was scheduled to be removed and disposed of in 1998 was removed. Please clarify.	The sentence describing the planned removals has been deleted to avoid confusion. The three pieces of electrical equipment in question all have PCB contents less than 50 ppm and, therefore, would be classified as "non-PCB" under the Toxic Substances Control Act. The PCB content of these pieces of equipment is also less than 5 ppm, which is the California threshold for disposal of PCB waste liquid.

RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015 (CONTINUED)

Comment Number	Section/ Page	Comment	Response to Comment
3.	Section 3.7	Indicates a survey was conducted in 2001 and 2004 for IPE that may contain PCBs. It is not clear why the other items listed that may also contain PCBs (e.g. elevator motors, powerhouse generators) were not included in the survey. Please clarify.	The cited statement was included only to clarify the scope of the survey of industrial process equipment (IPE). Other electrical equipment that might have contained PCBs was included in the previous basewide equipment surveys, discussed earlier in Section 3.7. The text was not revised as a result of this comment.

RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015 (CONTINUED)

Comment Number	Section/ Page	Comment	Response to Comment
4.	Section 4.0, South – Parcel C and Former Parcel A, Page 14	Indicates there are no potential impacts to Parcel B-1 from this Parcel because it has been transferred. It is not clear that no COCs remain on Parcel A. If there are no COCs in groundwater or soil vapor at concentrations that exceed screening levels, that may migrate to Parcel B-1, this should be indicated.	The text of the first paragraph has been expanded as follows.  "Former Parcel Adeleted from the NPL. No COCs remain in groundwater or soil vapor at concentrations that exceed screening levels that may migrate to the Property. Therefore"
		<ul> <li>Paragraph 3. The following sentence is not clear and should be revised as follows: However, the soil gas survey conducted in 2010 at Parcel B (Sealaska 2013) included samples along the boundary between the Property and Parcel C and, results indicate there is a potential for soil gas migration from Parcel C to Parcel B.</li> <li>Ongoing and completed remedial actions – Groundwater – The word destroy is not appropriate. Please replace.</li> </ul>	The text in the third paragraph has been revised as follows.  "However, tThe soil gas survey conducted in 2010 at Parcel B (Sealaska 2013) included samples along the boundary between the Property and Parcel C and indicated there is a potential for soil gas to migrate from Parcel C to the Property; therefore, provides an indication of potential soil gas migration."
			The word "destroy" has been replaced as follows.
			"Treatment using ZVI or biological substrate to break down destroy-VOCs (in progress)."

RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Comments from S	San Francisco Regional Water Quality C	control Board (Tina Low, dated April 20, 2015)
General Cor	nment		
1.		This report includes forward-looking statements that refer to documents or actions that are not yet finalized or completed. As these documents/actions become finalized, I may have additional comments. The Remedial Action Completion Report (RACR) for Parcel B-1 is at the Draft stage, and I submitted comments April 8, 2015. Comments submitted on the draft RACR will need to be adequately addressed before the FOST can be finalized.	Comment noted. The FOST has been updated to account for comments on the RACR.

RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015 (CONTINUED)

Comment Number	Section/Page	Comment	Response to Comment
Specific Co			
2.	Section 3.1, Comprehensive Environmental Response, Compensation, and Liability Act	In the text, please clarify whether the original 1997 Parcel B Record of Decision (ROD) included cleanup of impacted soil and structures, or whether this was added in the 2009 Amended ROD. If radiological cleanup was not included in the 1997 ROD, please explain why not and how it was deemed necessary to include the cleanup in the 2009 Amended ROD.	Section 3.1 already states "Updated information gained froma historical radiological assessment (HRA) indicated that an amended ROD would be required." Section 3.1.4 describes the HRA that was conducted, post-ROD, in 2004 and was the basis for including remedial actions for radionuclides in the 2009 amended ROD. Section 3.1 has been revised as follows to further clarify that actions for radionuclides were added in the amended ROD.  "Finally, the amended remedy was also expanded to included institutional controls (IC) and cleanup of radiologically impacted soil and structures"
3.	Section 3.6, Lead- Based Paint	The third paragraph of this section states that "The Navy is not aware of any LBP [lead-based paint] that has been released into the environment and poses a threat to human health on the Property." However, as discussed in Section 5.3, lead from LBP may exist in soil surrounding buildings from weathering of LBP. LBP chips have been observed on the durable cover throughout the base. Please clarify the statement in Section 3.6 to discuss the peeling/weathered LBP chips.	The cited statement accurately represents the Navy's position. Section 5.3 already states that lead from LBP may exist in soil surrounding buildings that may have been stripped from the buildings through normal weathering. The report was not changed as a result of this comment.

RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCEL B-1, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MARCH 2015 (CONTINUED)

Comment Number	Section/Page	Comment	Response to Comment
4.	Section 3.7, Polychlorinated Biphenyls (PCBs)	Please clarify in the text whether the three pieces of electrical equipment (containing PCBs), that were abandoned or out of service, were disposed of offsite. The text states that the pieces of equipment were scheduled to be removed and disposed of offsite in 1998, but does not state that the disposal actually occurred.	The sentence describing the planned removals has been deleted to avoid confusion. The three pieces of electrical equipment in question all have PCB contents less than 50 ppm and, therefore, would be classified as "non-PCB" under the Toxic Substances Control Act. The PCB content of these pieces of equipment is also less than 5 ppm, which is the California threshold for disposal of PCB waste liquid.

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Comments fro	om City and County of San Francisco (Amy Brow	nell, dated June 25, 2015)
General Cor	mments		
1.		SFDPH may have additional comments on the FOST following receipt of Navy response to comments on the Draft Remedial Action Completion Report for Parcel B-1 particularly in relation to the remedial action at Building 123/IR-10.	Comment noted. The FOST has been updated to account for comments on the RACR.
2.		It would be very helpful for preparation of subsequent documents that are necessary for the transfer, e.g. the Statement of Facts for the Covenant to Restrict Use of Property and Section 2.0 of the Risk Management Plan, if you could list the specific COCs that remain in soil, groundwater, and soil gas at concentrations above remedial goals or action levels. If you do not wish to include this information in the FOST, it would be helpful if this information could be sent separately.	Comparison of existing concentrations to remediation goals is beyond the scope of a FOST. The table in Appendix A adequately discloses the chemicals that may be present at the Property.

Comment Number	Section/Page	Comment	Response to Comment	
Specific Co	Specific Comments			
3.	Section 3.3.1, Pre-ROD Removal Actions, page 4	Please clarify whether sand blast grit was removed from Parcel B-1.	The text of Section 3.1.1 has been revised as follows.  "Approximately 4,665 tons of sandblast grit was collected from areas across HPNS, <i>including Parcel B</i> , and consolidated at Parcel E (Battelle 1996)."	
4.	Section 3.3.1, ASTs, page 8	Please add the reference which documents removal of the former ASTs at Buildings 115 and 120.	No additional references exist; the text was not changed. Evidence that the aboveground storage tanks (AST) are no longer present at the Property is based on a visual inspection conducted in January 2015.	
5.	Section 3.5, Asbestos- Containing Materials, First paragraph, page 9	At the end of the paragraph it says ACM remains in all buildings. Later, in the notice Section 5.2 it says that ACM is presumed to exist on any steam lines remaining on the property. If this is the case, this fact should be stated in Section 3.5.	The text of Section 3.5 has been expanded as follows.  "Even though remediation has been conducted, ACM or suspected ACM is assumed to remain in all buildings at the Property and any remaining steam lines at the Property."	
6.	Section 3.7, PCBs, page 11	Please clarify whether the PCB-bearing electrical equipment scheduled for removal in 1998 was in fact removed from Parcel B-1 as planned.	The sentence describing the planned removals has been deleted to avoid confusion. The three pieces of electrical equipment in question all have PCB contents less than 50 ppm and, therefore, would be classified as "non-PCB" under the Toxic Substances Control Act. The PCB content of these pieces of equipment is also less than 5 ppm, which is the California threshold for disposal of PCB waste liquid.	

Comment Number	Section/Page	Comment	Response to Comment
7.	Section 4.0, Adjacent Parcels, second paragraph, page 12	This paragraph states: "There is little potential for radioactive materials in adjacent parcels to pose a risk at the Property. The only potential exposure pathway for radiological exposure would be via inhalation of windblown dust from uncovered areas. The Navy maintains active dust control measures for all radiologically impacted areas at HPNS, including those adjacent to the Property (Tetra Tech EC, Inc. 2009). The basewide radiological contractor periodically measures the dose rate at the perimeter of all radiologically impacted areas, and these measurements indicate no migration of radiological materials. Likewise, basewide monitoring for dust does not indicate radioactive contamination in the dust."	Windblown dust may migrate onto the Property from anywhere on Hunters Point Naval Shipyard (HPNS). This paragraph is intended to address this fact. The majority of this paragraph was added, verbatim, based on city comments on the identical section of the FOST for Parcels UC-1 and UC-2 (see city comment 3 dated June 4, 2013). The text was not changed as a result of this comment.
		All of the radiological cleanup work has been completed on all sides of Parcel B-1 – correct? So there are no areas with any possible radiological contamination in proximity to B-1. And the majority of the areas around B-1 also have a durable cover installed with the exception of the area adjacent to Parcel C near IR-06 and Bldg 134 where there is ongoing SVE and other remediation. But those uncovered areas	

Comment Number	Section/Page	Comment	Response to Comment
7. (con't)	Section 4.0, Adjacent Parcels, second paragraph, page 12	do not have any remaining radiological concerns. And your paragraph makes the argument that even if dust exists, your monitoring does not indicate radioactive contamination in the dust. We recommend deleting this paragraph.	Response included above.
8.	Section 4.0, Adjacent Parcels, Northwest – IR Sites 7 and 18, first two paragraphs	We recommend deleting the first two paragraphs because they are describing possibilities that might have occurred prior to the IR Sites 7 and 18 FOST being issued and the methane probes having been removed. And then adding a paragraph after the one entitled "Completed Remedial Actions" and explain in a few sentences that this site has been found suitable for transfer in an approved FOST (with information on regulatory concurrence.) And then describe why the property does not pose of risk from groundwater, soil gas or contaminants in soil, including radiological materials because all necessary remediation was undertaken and the FOST documented that the property is suitable for transfer for the intended use.	The descriptions of the potential for groundwater or soil gas to migrate to the Property are accurate and have been maintained to promote consistency with the descriptions for other adjacent parcels. This section has been expanded as follows to introduce the final FOST for IR Sites 7 and 18.  "IR Sites 7 and 18 have been found suitable for transfer, as summarized in the Final FOST for IR Sites 7 and 18 (ChaduxTt 2013)."

Comment Number	Section/Page	Comment	Response to Comment
9.	Section 4.0, South – Parcel C and former Parcel A, page 14, paragraph 2	Section 4.0 states "Groundwater flows from IR Site 25 at adjacent Parcel C onto the Property. Groundwater in this area (termed RU-C5) has been adequately characterized and is being actively remediated. Remediation is expected to address any potential migration of VOCs in groundwater from Parcel C." Please clarify that the RU-C5 plume at Parcel C extends onto Parcel B-1 as evidenced by vinyl chloride concentrations in groundwater greater than RGs at well IR20MW17A and that remediation at Parcel C is "expected to address any ongoing migration" of VOCs from Parcel C to Parcel B-1.	The Navy does not agree that vinyl chloride concentrations observed in samples from well IR20MW17A demonstrate migration of volatile organic compounds (VOC) from Parcel C onto the Property. The text was not changed as a result of this comment.
10.	Section 4.0, South – Parcel C and former Parcel A, page 14, paragraph 3, last sentence	Please state that soil gas confirmation sampling will be conducted to confirm that the remediation has addressed any potential soil gas migration from Parcel C.	The text has been expanded as follows.  "Soil gas confirmation sampling will be conducted in remediation areas to confirm the remediation has addressed the potential for soil gas migration."
11.	Section 5.3, Lead-Based Paint, page 15	Consistent with recent clarification edits that were made to the UC1 and UC2 deeds, please add "resulting from LBP" following the phrase "soil-lead hazards" in the 12th and 16th lines of this paragraph.	The text has been revised as requested.

Comment Number	Section/Page	Comment	Response to Comment		
12.	Section 7, Covenants, Lead-Based Paint, page 18	Consistent with recent clarification edits that were made to the UC1 and UC2 deeds, please add "resulting from LBP" following the phrase "soil-lead hazards" in the 4th line of the paragraph.	The text has been revised as requested.		
13.	Figure 5, Petroleum Program	Please show the locations of the former ASTs at Buildings 115 and 120 on Figure 5.	Section 3.3.1 has been expanded to indicate that the exact former locations of the ASTs at Buildings 115 and 120 are unknown. Figure 5 has not been revised.		
Minor Comr	Minor Comments				
14.	General	Check acronyms singular or plural e.g., VOCs versus "VOC"; "AST" versus ASTs.	The FOST has been checked for consistent acronym usage.		
15.	Section 2.0, Property Description, page 1, paragraph 1, 1st sentence	Awkward "San Francisco Bay, California."	The text clearly states the physical location of HPNS and was not changed.		
16.	Section 3.3.3, Fuel Pipelines	Refer to Figure 5.	The text has been expanded as follows.		
			"Figure 5 shows the locations of fuel pipelines."		

Comment Number	Section/Page	Comment	Response to Comment
17.	Section 4.0, Northeast, page 13, paragraph 2, 1st sentence	Typo – double periods.	This typographical error has been corrected.

#### REFERENCES

- Battelle. 1996. Field Demonstration Report on Recycling Spent Sandblasting Grit into Asphaltic Concrete, Volume I, Field Demonstration Test Methods, Results and Conclusions. January 11.
- CDM Smith. 2012. Final Treatability Study Completion Report, Remedial Unit-C5, Building 134, Hunters Point Naval Shipyard, San Francisco, California. January 27.
- ChaduxTt. 2013. Final Finding of Suitability to Transfer for Parcel B IR Sites 7 and 18, Hunters Point Naval Shipyard, San Francisco, California. February 4.
- Department of the Navy. 2009. Final Amended Parcel B Record of Decision, Hunters Point Shipyard, San Francisco, California. January 26.
- Engineering/Remediation Resources Group Inc. (ERRG). 2016. Final Operation and Maintenance Plan for Parcel B-1, Hunters Point Naval Shipyard, San Francisco, California. June.
- IT Corporation. 2001. Phase II Soil Vapor Extraction Treatability Study Report, Building 134, IR-25, Parcel C, Hunters Point Shipyard, San Francisco, California. December 31.
- Shaw Environmental, Inc. (Shaw). 2005. In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study, Remedial Unit C5, Building 134, Installation Restoration Site 25, Hunters Point Shipyard, San Francisco, California. Final. November 23.
- Tetra Tech Foster Wheeler Inc. 2004. Draft Final Post Construction Report: Decontaminate Process Equipment, Conduct Waste Consolidation, and Provide Asbestos Services in Parcels B, C, D, and E, Hunters Point Shipyard, San Francisco, California. July 9.